

Puumala Hantavirus Genotypes in Humans, France, 2012–2016

Appendix

Appendix Table 1. Results of the complete S coding domain sequence acquisition among the 228 Puumala virus strains detected in humans, France, 2012–2016

Administrative territories		Results					Total
Region	Department (code)*	No. complete CDS	No. partial CDS	No. amplification failure	No samples not tested	No. samples unavailable	
Hauts-de-France	Ain (02)	18	10	3	30	4	65
	Nord (59)	15	5	4	0	9	33
	Oise (60)	3	3	1	0	1	8
	Pas-de-Calais (62)	1	0	1	0	2	4
	Somme (80)	0	0	0	0	0	0
Grand-Est	Ardennes (08)	17	4	3	21	0	45
	Aube (10)	0	1	0	0	0	1
	Marne (51)	3	2	1	0	3	9
	Haute-Marne (52)	0	0	0	0	1	1
	Meurthe-et-Moselle (54)	1	1	0	0	0	2
	Meuse (55)	2	0	0	0	2	4
	Moselle (57)	0	0	0	0	1	1
	Bas-Rhin (67)	0	0	0	0	1	1
	Haut-Rhin (68)	1	0	0	0	1	2
	Vosges (88)	0	0	0	0	0	0
Ile-de-France	Paris (75)	0	0	0	0	0	0
	Seine-et-Marne (77)	0	1	1	0	0	2
	Yvelines (78)	0	1	1	0	0	2
	Hauts-de-Seine (92)	0	0	0	0	1	1
	Seine-Saint-Denis (93)	0	1	0	0	0	1
	Val-de-Marne (94)	2	0	0	0	0	2
	Val-d'Oise (95)	0	0	0	0	0	0
Centre Val-de-Loire	Loiret (45)	0	0	0	0	1	1
Bourgogne	Côte d'Or (21)	1	0	1	0	3	5
Franche-Comté	Doubs (25)	3	2	5	0	3	13
	Jura (39)	4	0	2	0	6	12
	Nièvre (58)	1	0	1	0	0	2
	Haute-Saône (70)	3	0	1	0	2	6
	Saône-et-Loire (71)	0	0	0	0	0	0
	Yonne (89)	0	0	2	0	0	2
	Territoire de Belfort (90)	0	1	0	0	0	1
	Auvergne Rhône-Alpes	Ain (1)	0	0	0	0	0	0
	Isère (38)	1	0	0	0	0	1
	Savoie (73)	1	0	0	0	0	1
Total		77	32	27	51	41	228

* The 34 departments listed are the hantavirus-endemic departments (1).

Appendix Table 2. Primers used in the 3 overlapping heminested RT-PCR assays performed to obtain the PUUV S CDS*

Heminested RT-PCR	Step	Product size, bp	Primers	Positions	Sequences (5'-3')
1	RT-PCR	920	PUUV-S-9 F PUUV-S-928 R	9-31 928-909	GAC TCC TTG AAR AGY TRC TAC GA CTC CTG ARG CTG CRT ART CA
	Nested PCR	700	PUUV-S-9 F PUUV-S-708R	9-31 708-689	GAC TCC TTG AAR AGY TRC TAC GA KAC TCC CAT YAC AGG RCT CA
2	RT-PCR	725	PUUV-S-376 F PUUV-F-1100 R	376-395 1100-1079	CCR AGT GGY CAA ACA GCR GA CCA ACA GTT TTR GAH GCC ATR A
	Nested PCR	629	PUUV-S-472 F PUUV-S-1100 R	472-491 376-395	CGT GGG AGA CAR ACT GTR AA CCR AGT GGY CAA ACA GCR GA
3	RT-PCR	917	PUUV-S-919 F PUUV-S-1835 R	919-938 1835-1812	GCY TCA GGA GAT CCD ACA TC CCT TGA AAA GCA ATC AAG AAA TC
	Nested PCR	599	PUUV-S-919 F PUUV-S-1517 R	919-938 1517-1494	GCY TCA GGA GAT CCD ACA TC YYT AYT TCC AGK TAA ACC CTG ATT

*Positions according to the sequence GenBank accession no U22423.1. RT-PCR, reverse transcription PCR.

Appendix Figure. Alignment of the small ARN coding domain sequences obtained from Puumala virus strains detected in humans, France, 2012–2016. The first 2 lines of the alignment colored in red are repeated at each page change. Positions and sequences of primers and probes used to detect Puumala virus by real time RT-PCR are indicated (2–7), as well as those used to detect several hantavirus species, including Puumala virus, by nested RT-PCR (8).

Garin D et al Microb. Infect 2001 PUUF1 GAAAAAACTGGGATGAGTGACTTG

CRRSAp

ATAACCCGCCATGAACAACAGCTTG ACAACGGTCTGTTTTTCGAGTT PUR1

					*	20	*	40	*	60	*	80	*	100							
2014.00598	PUUV	N	France	H.s.	|59	FOURMIES	:	ATGAGTGACTTGACAGACATTCAGGAGGATATAACCCGCCATGAACAACA	CTGTTGTTGCCAGACAGAACTCAAGGATGCAGAAAAGCGGTGGAGA	:	100										
2014.00233	PUUV	N	France	H.s.	|59	FOURMIES	:	.....T.....		:	100									
2014.00097	PUUV	N	France	H.s.	|02	SAINT-MICHEL	:			:	100										
2014.00488	PUUV	N	France	H.s.	|08	SIGNY-LE-PETIT	:				A.				100						
2014.00613	PUUV	N	France	H.s.	|59	FOURMIES	:								100						
2015.00402	PUUV	N	France	H.s.	|08	CHARLEVILLE-MEZIE	:								100						
2015.00422	PUUV	N	France	H.s.	|59	ANOR	:								100						
2015.00488	PUUV	N	France	H.s.	|08	SEDAN	:								100						
2015.00498	PUUV	N	France	H.s.	|08	REMILLY-AILLICOUR	:								100						
2016.00295	PUUV	N	France	H.s.	|08	CORNY-MACHEROMENI	:								100						
2016.00333	PUUV	N	France	H.s.	|59	FOURMIES	:								100						
2016.00345	PUUV	N	France	H.s.	|59	FOURMIES	:								100						
2016.00357	PUUV	N	France	H.s.	|02	HIRSON	:								100						
2016.00427	PUUV	N	France	H.s.	|59	FOURMIES	:								100						
2016.00469	PUUV	N	France	H.s.	|02	PREMONTRE	:					G.		G.	100						
AJ277075.1	PUUV	N	Belgium	M.g.	|Montbliart/CG14444		:								100						
2014.00053	PUUV	N	France	H.s.	|08	SECHEVAL	:								100						
KT247593.1	PUUV	N	France	M.g.	|08	Ardennes/Mg75/201	:						A.	A.	100						
KT247592.1	PUUV	N	France	M.g.	|08	Ardennes/Mg156/20	:							A.	100						
2015.00019	PUUV	N	France	H.s.	|08	ETEIGNIERES	:								100						
2016.00239	PUUV	N	France	H.s.	|08	VIREUX-MOLHAIN	:								100						
2015.00329	PUUV	N	France	H.s.	|08	BOGNY-SUR-MEUSE	:								100						
2014.00209	PUUV	N	France	H.s.	|08	TREMBLOIS-LES-ROC	:								100						
2015.00456	PUUV	N	France	H.s.	|94	ALFORTVILLE	:								100						
2012.00018	PUUV	N	France	H.s.	|08	ROCROI	:								100						
AJ277032.1	PUUV	N	Belgium	M.g.	|Momignies/47Cg/96		:								100						
AJ277034.1	PUUV	N	Belgium	M.g.	|Couvin/59Cg/97		:								100						
AJ277033.1	PUUV	N	Belgium	M.g.	|Momignies/55Cg/96		:								100						
2012.00638	PUUV	N	France	H.s.	|08	GIVET	:								100						
2015.00328	PUUV	N	France	H.s.	|08	VRIGNE-MEUSE	:					A.			100						
2015.00419	PUUV	N	France	H.s.	|08	DOUZY	:								100						
2016.00310	PUUV	N	France	H.s.	|08	THIN-LE-MOUTIER	:								100						
AJ277030.1	PUUV	N	Belgium	M.g.	|Thuin/33Cg/96		:								100						
AJ238779.1	PUUV	N	Germany	M.g.	|NRW/Cg-Erft		:					A.	G.		A.	100					
2014.00276	PUUV	N	France	H.s.	|59	LILLE	:						C.		G.	G.	100				
U22423.1	PUUV	N	Belgium	M.g.	|CG13891		:						G.		A.	G.	100				
2014.00321	PUUV	N	France	H.s.	|59	FOURMIES	:									100					
2015.00457	PUUV	N	France	H.s.	|55	REVIGNY-SUR-ORNAI	:								G.	100					
2013.00250	PUUV	N	France	H.s.	|62	VENDIN-LS-BTHUNE	:						A.	A.	T.		A.	100			
2016.00282	PUUV	N	France	H.s.	|59	MORBECQUE	:						A.		T.		G.	100			
AJ277076.1	PUUV	N	Belgium	M.g.	|Montbliart/CG14445		:								T.			100			
2014.00153	PUUV	N	France	H.s.	|02	BUIRONFOSSE	:								A.			100			
2014.00171	PUUV	N	France	H.s.	|59	SAINT-SAULVE	:						A.		A.	G.		A.	G.	A.	100
2016.00293	PUUV	N	France	H.s.	|60	LA-NEUVILLE-SUR-R	:						A.	A.		A.	G.		A.	A.	100
2014.00499	PUUV	N	France	H.s.	|94	CHAMPIGNY-SUR-MAR	:								A.					100	
2012.00057	PUUV	N	France	H.s.	|59	COUSOLRE	:								T.					100	
2012.00349	PUUV	N	France	H.s.	|02	ENGLANCOURT	:								A.					100	
2014.00135	PUUV	N	France	H.s.	|02	ATHIES-SOUS-LAON	:								A.					100	
2014.00184	PUUV	N	France	H.s.	|59	FOURMIES	:								T.				T.	100	
2016.00182	PUUV	N	France	H.s.	|08	BOULZICOURT	:								T.			G.		100	
2016.00286	PUUV	N	France	H.s.	|02	TRUCY	:								A.					100	
2016.00325	PUUV	N	France	H.s.	|59	AULNOYE-AYMERIES	:								T.				T.	A.	100
2016.00452	PUUV	N	France	H.s.	|02	LAON	:								A.					100	
2016.00467	PUUV	N	France	H.s.	|02	AISNE	:								A.					A.	100

		*	20	*	40	*	60	*	80	*	100	
2014.00598	PUUV|N|France|H.s.|59|FOURMIES|	:	ATGAGTGACTTGACAGACATTCAGGAGGATATAACCCGCCATGAACAACA	:	CTGTTGTTGCCAGACAGAACTCAAGGATGCAGAAAAGCGGTGGAGA	:	:	:	:	:	:	100
2015.00657	PUUV|N|France|H.s.|02|CILLY|	:	.....T.....T.....	:	.....A..G.....G.....A.....	:	:	:	:	:	:	100
2015.00526	PUUV|N|France|H.s.|08|MONTHERME|	:	.....	:	.....	:	:	:	:	:	:	100
2015.00045	PUUV|N|France|H.s.|59|FOURMIES|	:	.....T.....	:	.....	:	:	:	:	:	:	100
2015.00430	PUUV|N|France|H.s.|02|MONTCORNET|	:	.....	:	.....A.....	:	:	:	:	:	:	100
2016.00311	PUUV|N|France|H.s.|02|LAON|	:	.....	:	.....A.....	:	:	:	:	:	:	100
AJ277031.1	PUUV|N|Belgium|M.g.|Montbliart/23Cg/96|	:	.....T.....	:	.....	:	:	:	:	:	:	100
2016.00326	PUUV|N|France|H.s.|02|LAON|	:	.....G.....	:	.....A.....	:	:	:	:	:	:	100
2016.00353	PUUV|N|France|H.s.|02|CESSIERES|	:	.....	:	.....A.....	:	:	:	:	:	:	100
2012.00061	PUUV|N|France|H.s.|02|LANISCOURT|	:	.....	:	.....A..T.....	:	:	:	:	:	:	100
2014.00174	PUUV|N|France|H.s.|02|ST-ERME-OUTRE-ET-	:	.....	:	.....A.....	:	:	:	:	:	:	100
2016.00268	PUUV|N|France|H.s.|02|PRESLES-ET-THIERN	:	.....	:	.....A.....	:	:	:	:	:	:	100
2015.00660	PUUV|N|France|H.s.|02|VIC-SUR-AISNE|	:	.....A.....	:	.....G.....	:	:	:	:	:	:	100
2012.00025	PUUV|N|France|H.s.|51|SAINTE-MENEHOULD|	:	.....T..A.....	:	.....T.G.A..A.G.T.....	:	:	:	:	:	:	100
2015.00665	PUUV|N|France|H.s.|51|REIMS|	:	.....T.....	:	.....G.....G..G.A.G.....	:	:	:	:	:	:	100
2012.00307	PUUV|N|France|H.s.|54|COLOMBEY-LES-BELL	:	.....G..T.....	:	.....A.G.....	:	:	:	:	:	:	100
2012.00123	PUUV|N|France|H.s.|55|BAR-LE-DUC|	:	.....T.....T.....	:	.....G.....A.G.T.....	:	:	:	:	:	:	100
2012.00278	PUUV|N|France|H.s.|51|REIMS|	:	.....T.....	:	.....G.....G.A.G.T.....	:	:	:	:	:	:	100
2015.00185	PUUV|N|France|H.s.|68|FELLERING|	:	.....T.....	:	.....G.T.....A.G.T.....	:	:	:	:	:	:	100
KJ994776.1	PUUV|N|Germany|M.g.|Mu/07/1219|2007|	:	.....A.....A.....	:	.....G.....G.A.G.T.....	:	:	:	:	:	:	100
2012.00086	PUUV|N|France|H.s.|58|CHEVROCHES|	:	.....A.....C.....	:	.....A..A.G.T.....	:	:	:	:	:	:	100
KT247595.1	PUUV|N|France|M.g.|45|Orleans/Mg29/2010	:	.....A..T.C.....T.....	:	.....A..A.G.....G.....A.....	:	:	:	:	:	:	100
KT247594.1	PUUV|N|France|M.g.|45|Orleans/Mg23/2010	:	.....A..T.C.....T.....	:	.....A..A.G.....G.....A.....	:	:	:	:	:	:	100
KY365004.1	PUUV|N|France|M.g.|45|Orleans/NCHA373/2	:	.....A..T.C.A.....	:	.....A..A.G.....A.....	:	:	:	:	:	:	100
2012.00301	PUUV|N|France|H.s.|25|MOUTHE|	:	.....g.....A..A.....	:	.....A.....	:	:	:	:	:	:	100
AM695638.1	PUUV|N|France|M.g.|Mignovillard/CgY02/2	:	.....G.....A..A.....	:	.....A.....	:	:	:	:	:	:	100
KT247597.1	PUUV|N|France|M.g.|39|Jura/Mg214/2010|	:	.....A.....	:	.....	:	:	:	:	:	:	100
KT247596.2	PUUV|N|France|M.g.|39|Jura/Mg2/2010|	:	.....A.....	:	.....	:	:	:	:	:	:	100
2012.00102	PUUV|N|France|H.s.|39|COISERETTE|	:	.....A.....	:	.....	:	:	:	:	:	:	100
2012.00536	PUUV|N|France|H.s.|39|LA-PESSE|	:	.....A.....	:	.....	:	:	:	:	:	:	100
2014.00622	PUUV|N|France|H.s.|39|ARBOIS|	:	.....A..A.....	:	.....	:	:	:	:	:	:	100
2015.00567	PUUV|N|France|H.s.|70|RIOZ|	:	.....A.....	:	.....	:	:	:	:	:	:	100
2014.00637	PUUV|N|France|H.s.|25|SAULES|	:	.....A.....	:	.....	:	:	:	:	:	:	100
2012.00396	PUUV|N|France|H.s.|39|SAINT-CLAUDE|	:	.....A..A.....	:	.....	:	:	:	:	:	:	100
2014.00120	PUUV|N|France|H.s.|38|LE-MOUTARET|	:	.....A..A.....	:	.....T.....	:	:	:	:	:	:	100
2015.00153	PUUV|N|France|H.s.|73|GREZY-SUR-ISERE|	:	.....A..A.....	:	.....T.....	:	:	:	:	:	:	100
2015.00504	PUUV|N|France|H.s.|70|RONCHAMP|	:	.....G.....A.....	:	.....	:	:	:	:	:	:	100
2016.00275	PUUV|N|France|H.s.|21|JALLANGES|	:	.....T.....A.....	:	.....	:	:	:	:	:	:	100
2016.00320	PUUV|N|France|H.s.|25|SAINT-VIT|	:	.....A.....	:	.....	:	:	:	:	:	:	100
2015.00410	PUUV|N|France|H.s.|70|ANGIREY|	:	.....G.....A.....	:	.....	:	:	:	:	:	:	100
DQ016430.2	PUUV|N|Germany|M.g.|Bavaria/CG33/04|	:	.....A..G.....	:	.....A.....	:	:	:	:	:	:	100
DQ016432.2	PUUV|N|Germany|M.g.|Bavaria/CG41/04|	:	.....A..G.....	:	.....A.....	:	:	:	:	:	:	100
AY954723.2	PUUV|N|Germany|M.g.|Bavaria-CG34/04|	:	.....A..G.....	:	.....G.....A.....	:	:	:	:	:	:	100
AY954722.2	PUUV|N|Germany|M.g.|Bavaria-CG9/04|	:	.....T.....	:	.....A..G.....	:	:	:	:	:	:	100
2012.00402	PUUV|N|France|H.s.|60|GOUVIEUX|	:	.....T.....T.....	:	.....A.....	:	:	:	:	:	:	100
2014.00540	PUUV|N|France|H.s.|60|CHAMBLY|	:	.....T.....A.....	:	.....	:	:	:	:	:	:	100
AJ314600.1	PUUV|N|Balkan|M.g.|Balkan-1|	:	.....T.C.A.....	:	.....G.....G.....A.....A.....	:	:	:	:	:	:	100
AJ314601.1	PUUV|N|Balkan|M.g.|Balkan-2|	:	.....T.C.A.....	:	.....G.....G.....A.....A.....	:	:	:	:	:	:	100
FN377821.1	PUUV|N|Hungary|M.g.|Mg9/HungaryTR17/00|	:	.....G.....T.C.A.....	:	.....G.....T.....G.....A.....A.....	:	:	:	:	:	:	100
FN377822.1	PUUV|N|Hungary|M.g.|Mg23/HungaryTR17/00	:	.....T.C.A.....	:	.....G.....G.....A.....A.....	:	:	:	:	:	:	100
GQ339473.1	PUUV|N|Sweden|M.g.|Kiviniemi/Mg3/05|	:	.....T.....A.....T.....	:	.....G.....A.....T.....A.....	:	:	:	:	:	:	100
GQ339474.1	PUUV|N|Sweden|M.g.|Kiviniemi/Mg5/05|	:	.....T.....A.....T.....	:	.....G.....A.....T.....A.....	:	:	:	:	:	:	100
GQ339475.1	PUUV|N|Sweden|M.g.|Kiviniemi/Mg6/05|	:	.....T.....A.....T.....	:	.....G.....A.....T.....A.....	:	:	:	:	:	:	100
GQ339476.1	PUUV|N|Sweden|M.g.|Aijajarvi/Mg7/05|	:	.....T.....A.....T.....	:	.....G.....A.....T.....A.....	:	:	:	:	:	:	100

Garin D et al Microb. Infect 2001 PUUF1 GAAAAAACTGGGATGAGTGACTTG

CRRSAp

ATAACCCGCCATGAACAACAGCTTG ACAACGGTCTGTTTTTCGAGTT PUR1

	*	20	*	40	*	60	*	80	*	100	
2014.00598|PUUV|N|France|H.s.|59|FOURMIES|	:	ATGAGTGACTTGACAGACATTCAGGAGGATATAACCCGCCATGAACAACA	:	ACTTGTGTGTTGCCAGACAGAACTCAAGGATGCAGAAAAGGCGGTGGAGA	:	:	:	:	:	:	100
AF367070.1|PUUV|N|Russia|M.r.|CRF308|	:	.....T.....A.....T.....G.....C.....A.....T.....A.....	:	.....G.....C.....A.....T.....A.....	:	.....GA.....A.....	:	.....	:	.....	100
AF367066.1|PUUV|N|Russia|M.g.|CG215|	:	.....T.....A.....T.....G.....C.....A.....T.....A.....	:	.....G.....C.....A.....T.....A.....	:	.....GA.....A.....	:	.....	:	.....	100
AF367067.1|PUUV|N|Russia|M.g.|CG222|	:	.....T.....A.....T.....G.....C.....A.....T.....A.....	:	.....G.....C.....A.....T.....A.....	:	.....GA.....A.....	:	.....	:	.....	100
Z46942.1|PUUV|N|Finland|M.g.|Puumala/1324Cg/79|	:	.....T.....C.....A.....G.....G.....T.....A.....T.....A.....	:	.....G.....G.....T.....A.....T.....A.....	:	.....GA.....A.....AG	:	.....	:	.....	100
Z30702.1|PUUV|N|Finland|M.g.|Evo/12Cg/93|	:	.....T.....C.....A.....G.....G.....A.....T.....G.....GA.....A.....	:	.....G.....G.....A.....T.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
Z30703.1|PUUV|N|Finland|M.g.|Evo/13Cg/93|	:	.....T.....C.....A.....G.....G.....A.....T.....G.....GA.....A.....	:	.....G.....G.....A.....T.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
Z30704.1|PUUV|N|Finland|M.g.|Evo/14Cg/93|	:	.....T.....C.....A.....G.....G.....A.....T.....G.....GA.....A.....	:	.....G.....G.....A.....T.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
Z30705.1|PUUV|N|Finland|M.g.|Evo/15Cg/93|	:	.....T.....C.....A.....G.....G.....AGG.....T.....G.....GA.....A.....	:	.....G.....G.....AGG.....T.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
Z69985.1|PUUV|N|Finland|M.g.|Virrat/25Cg/95|	:	.....T.....C.....A.....G.....G.....A.....T.....G.....GA.....A.....	:	.....G.....G.....A.....T.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
JN831947.1|PUUV|N|Finland|Pieksamaki/human_lung/20|	:	.....T.....C.....A.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
JN831943.1|PUUV|N|Finland|Pieksamaki/Mg7/2008|	:	.....T.....C.....A.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
JN831950.1|PUUV|N|Finland|Pieksamaki/human_kidney/	:	.....T.....C.....A.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
JQ319166.1|PUUV|N|Finland|Konnevesi/Mg_O14B/2005|	:	.....T.....C.....A.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
JQ319169.1|PUUV|N|Finland|Konnevesi/Mg_O27B/2005|	:	.....T.....C.....A.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
JQ319167.1|PUUV|N|Finland|Konnevesi/Mg_O15B/2005|	:	.....T.....C.....A.....T.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
JQ319164.1|PUUV|N|Finland|Konnevesi/Mg_O6B/2005|	:	.....T.....C.....A.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
JQ319165.1|PUUV|N|Finland|Konnevesi/Mg_O9B/2005|	:	.....T.....C.....A.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
JQ319170.1|PUUV|N|Finland|Konnevesi/Mg_O74B/2005|	:	.....T.....C.....A.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
JQ319171.1|PUUV|N|Finland|Konnevesi/Mg_M114B/2005|	:	.....T.....C.....A.....T.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
AJ238788.1|PUUV|N|Russia|M.g.|Karhumaki|	:	.....T.....C.....A.....G.....G.....A.....T.....G.....GA.....A.....	:	.....G.....G.....A.....T.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
AJ238789.1|PUUV|N|Russia|M.g.|Kolodozero|	:	.....T.....C.....A.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....G.....G.....A.....T.....A.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
AJ314597.1|PUUV|N|Finland|M.g.|Pallasjarvi/63Cg/98|	:	.....T.....C.....A.....G.....G.....A.....T.....G.....GA.....A.....	:	.....G.....G.....A.....T.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
NC_005224.1|PUUV|N|Finland|M.g.|Sotkamo-revu-NCBI2|	:	.....T.....C.....A.....G.....G.....A.....T.....G.....GA.....A.....	:	.....G.....G.....A.....T.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
AJ238790.1|PUUV|N|Russia|M.g.|Gomselga|	:	.....T.....C.....A.....G.....G.....A.....T.....G.....GA.....A.....	:	.....G.....G.....A.....T.....G.....GA.....A.....	:	.....AG	:	.....	:	.....	100
AB010731.1|Hokkaido-V|N|Japan|M.r.|Tobetsu-60Cr-93|	:	.....A.....T.....C.....C.....G.....A.....G.....T.....GA.....G.....A.....A.....A.....	:	.....C.....G.....A.....G.....T.....GA.....G.....A.....A.....A.....	:	.....	:	.....	:	.....	100
AB010730.1|Hokkaido-V|N|Japan|M.r.|Kamiiso-8Cr-95|	:	.....A.....T.....C.....C.....G.....A.....G.....T.....GA.....G.....A.....A.....A.....	:	.....C.....G.....A.....G.....T.....GA.....G.....A.....A.....A.....	:	.....	:	.....	:	.....	100
JX046487.1|Muju-V|N|South-Korea|M.r.|11-5|2011|	:	.....A.....AG.....A.....A.....A.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....	:	.....	:	.....	100
JX046484.1|Muju-V|N|South-Korea|M.r.|11-4|2011|	:	.....A.....AG.....A.....A.....A.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....	:	.....	:	.....	100
JX028273.1|Muju-V|N|South-Korea|M.r.|11-1|2011|	:	.....A.....AG.....A.....A.....A.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....	:	.....	:	.....	100
DQ138128.1|Muju-V|N|South-Korea|E.r.|00-18|	:	.....A.....AG.....A.....A.....A.....C.....G.....G.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....G.....G.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....	:	.....	:	.....	100
DQ138140.1|Muju-V|N|South-Korea|E.r.|99-27|	:	.....A.....AG.....A.....A.....A.....C.....G.....G.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....G.....G.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....	:	.....	:	.....	100
DQ138133.1|Muju-V|N|South-Korea|E.r.|96-1|	:	.....A.....AG.....A.....A.....A.....C.....G.....G.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....G.....G.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....	:	.....	:	.....	100
DQ138142.1|Muju-V|N|South-Korea|E.r.|99-28|	:	.....A.....AG.....A.....A.....A.....C.....G.....G.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....G.....G.....G.....G.....A.....G.....A.....G.....G.....A.....AG	:	.....	:	.....	:	.....	100

Lagerqvist N et al. J Clin Microbiol 2016 PUUV_F TGGACCCRGATGACGTTAACPUUV_PACACTGCAAGCAAGYGTGGTYTGTCACAGTCGTCAC PUUV_R
 Kramski M et al. Clin Chemistry 2007 (end PUUV F) TGGACCCRGATGACGTTAA PUUVTMGB CAACARACAGTGCAGCA (end of PUUV R) TACCGTCT

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	*	120	*	140	*	160	*	180	*	200
2014.00598 PUUV N France H.s. 59 FOURMIES	:	TGGACCCAGATGACGTTAA	:	CAAAAACACAT	:	TGCAAGCAAGGCAACAGACAGTGT	:	CAGCACTGGAGGACAAACTTGCAGACTTCAAGCGACAAATGGCAGA	:	200
2014.00233|PUUV|N|France|H.s.|59|FOURMIES|	:	.....	:	.....	:	.....	:	.....	:	200
2014.00097|PUUV|N|France|H.s.|02|SAINT-MICHEL|	:	.....	:	.....	:	.....	:	.....	:	200
2014.00488|PUUV|N|France|H.s.|08|SIGNY-LE-PETIT|	:	.....	:	.....	:	.....	:	.....	:	200
2014.00613|PUUV|N|France|H.s.|59|FOURMIES|	:	.....	:	.....	:	.....	:	.....	:	200
2015.00402|PUUV|N|France|H.s.|08|CHARLEVILLE-MEZIE|	:	.....	:	.....	:	.....	:	.....G.....	:	200
2015.00422|PUUV|N|France|H.s.|59|ANOR|	:	.....	:	.....	:	.....	:	.....	:	200
2015.00488|PUUV|N|France|H.s.|08|SEDAN|	:	.....	:	.....	:	.....	:	.....G.....	:	200
2015.00498|PUUV|N|France|H.s.|08|REMILLY-AILLICOUR|	:	.....	:	.....	:	.....	:	.....	:	200
2016.00295|PUUV|N|France|H.s.|08|CORNAY-MACHEROMENI|	:	.....	:	.....	:	.....	:	.....T.....	:	200
2016.00333|PUUV|N|France|H.s.|59|FOURMIES|	:	.....	:	.....	:	.....	:	.....	:	200
2016.00345|PUUV|N|France|H.s.|59|FOURMIES|	:	.....	:	.....	:	.....	:	.....	:	200
2016.00357|PUUV|N|France|H.s.|02|HIRSON|	:	.....	:	.....	:	.....	:	.....	:	200
2016.00427|PUUV|N|France|H.s.|59|FOURMIES|	:	.....	:	.....	:	.....	:	.....	:	200
2016.00469|PUUV|N|France|H.s.|02|PREMONTRE|	:	.....G.....	:	.....T.....	:	.....C.....	:	.....	:	200
AJ277075.1|PUUV|N|Belgium|M.g.|Montbliart/CG14444|	:	.....	:	.....	:	.....	:	.....	:	200
2014.00053|PUUV|N|France|H.s.|08|SECHEVAL|	:	.....	:	.....	:	.....	:	.....G.....	:	200
KT247593.1|PUUV|N|France|M.g.|08|Ardennes/Mg75/201|	:	.....	:	.....C.....	:	.....	:	.....G.....	:	200
KT247592.1|PUUV|N|France|M.g.|08|Ardennes/Mg156/20|	:	.....	:	.....C.....	:	.....	:	.....G.....	:	200
2015.00019|PUUV|N|France|H.s.|08|ETEIGNIERES|	:	.....	:	.....	:	.....	:	.....G.....	:	200
2016.00239|PUUV|N|France|H.s.|08|VIREUX-MOLHAIN|	:	.....	:	.....	:	.....	:	.....G.....	:	200
2015.00329|PUUV|N|France|H.s.|08|BOGNY-SUR-MEUSE|	:	.....	:	.....	:	.....	:	.....G.....	:	200
2014.00209|PUUV|N|France|H.s.|08|TREMBLOIS-LES-ROC|	:	.....	:	.....	:	.....	:	.....G.....	:	200
2015.00456|PUUV|N|France|H.s.|94|ALFORTVILLE|	:	.....	:	.....	:	.....	:	.....G.....	:	200
2012.00018|PUUV|N|France|H.s.|08|ROCROI|	:	.....	:	.....	:	.....	:	.....G.....	:	200
AJ277032.1|PUUV|N|Belgium|M.g.|Momignies/47Cg/96|	:	.....	:	.....	:	.....	:	.....G.....	:	200
AJ277034.1|PUUV|N|Belgium|M.g.|Couvin/59Cg/97|	:	.....	:	.....	:	.....	:	.....G.....	:	200
AJ277033.1|PUUV|N|Belgium|M.g.|Momignies/55Cg/96|	:	.....	:	.....	:	.....	:	.....G.....	:	200
2012.00638|PUUV|N|France|H.s.|08|GIVET|	:	.....	:	.....	:	.....	:	.....G.....	:	200
2015.00328|PUUV|N|France|H.s.|08|VRIGNE-MEUSE|	:	.....	:	.....	:	.....	:	.....	:	200
2015.00419|PUUV|N|France|H.s.|08|DOUZY|	:	.....	:	.....	:	.....	:	.....	:	200
2016.00310|PUUV|N|France|H.s.|08|THIN-LE-MOUTIER|	:	.....	:	.....	:	.....	:	.....	:	200
AJ277030.1|PUUV|N|Belgium|M.g.|Thuin/33Cg/96|	:	.....	:	.....	:	.....	:	.....	:	200
AJ238779.1|PUUV|N|Germany|M.g.|NRW/Cg-Erft|	:	.....	:	.....G.....	:	.....	:	.....	:	200
2014.00276|PUUV|N|France|H.s.|59|LILLE|	:	.....	:	.....	:	.....	:	.....	:	200
U22423.1|PUUV|N|Belgium|M.g.|CG13891|	:	.....	:	.....G.....	:	.....	:	.....A.....	:	200
2014.00321|PUUV|N|France|H.s.|59|FOURMIES|	:	.....	:	.....	:	.....	:	.....	:	200
2015.00457|PUUV|N|France|H.s.|55|REVIGNY-SUR-ORNAI|	:	.....G.....	:	.....T.....	:	.....	:	.....	:	200
2013.00250|PUUV|N|France|H.s.|62|VENDIN-LS-BTHUNE|	:	.....	:	.....	:	.....	:	.....	:	200
2016.00282|PUUV|N|France|H.s.|59|MORBECQUE|	:	.....	:	.....	:	.....	:	.....G.....	:	200
AJ277076.1|PUUV|N|Belgium|M.g.|Montbliart/CG14445|	:	.....	:	.....	:	.....	:	.....	:	200
2014.00153|PUUV|N|France|H.s.|02|BUIRONFOSSE|	:	.....	:	.....G.....	:	.....	:	.....	:	200
2014.00171|PUUV|N|France|H.s.|59|SAINT-SAULVE|	:	.....	:	.....C.A.....	:	.....T.....	:	.....C.....	:	200
2016.00293|PUUV|N|France|H.s.|60|LA-NEUVILLE-SUR-R|	:	.....	:	.....T.....	:	.....	:	.....T.....	:	200
2014.00499|PUUV|N|France|H.s.|94|CHAMPIGNY-SUR-MAR|	:	.....	:	.....	:	.....	:	.....T.....	:	200
2012.00057|PUUV|N|France|H.s.|59|COUSOLRE|	:	.....	:	.....	:	.....	:	.....	:	200
2012.00349|PUUV|N|France|H.s.|02|ENGLANCOURT|	:	.....	:	.....	:	.....	:	.....	:	200
2014.00135|PUUV|N|France|H.s.|02|ATHIES-SOUS-LAON|	:	.....	:	.....	:	.....	:	.....	:	200
2014.00184|PUUV|N|France|H.s.|59|FOURMIES|	:	.....	:	.....T.....	:	.....	:	.....	:	200
2016.00182|PUUV|N|France|H.s.|08|BOULZICOURT|	:	.....	:	.....	:	.....	:	.....	:	200
2016.00286|PUUV|N|France|H.s.|02|TRUCY|	:	.....	:	.....	:	.....	:	.....	:	200
2016.00325|PUUV|N|France|H.s.|59|AULNOYE-AYMERIES|	:	.....	:	.....	:	.....	:	.....	:	200
2016.00452|PUUV|N|France|H.s.|02|LAON|	:	.....	:	.....	:	.....	:	.....	:	200
2016.00467|PUUV|N|France|H.s.|02|AISNE|	:	.....	:	.....	:	.....	:	.....	:	200

Lagerqvist N et al. J Clin Microbiol 2016 PUUV_F TGGACCCRGATGACGTTAACPUUV_PACACTGCAAGCAAGYGTGTGTYGTTCACAGTCGTCAC PUUV_R
 Kramski M et al. Clin Chemistry 2007 (end PUUV F) TGGACCCRGATGACGTTAA PUUVTMGB CAACARACAGTGCAGCA (end of PUUV R) TACCGTCT

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	*	120	*	140	*	160	*	180	*	200
2014.00598 PUUV N France H.s. 59 FOURMIÉS	:	TGGACCCAGATGACGTTAA	CAAAAACACAT	TGCAAGCAAGGCAACAGACAGTGT	CAGCACTGGAGGACAACTTGCAGACTTCAAGCGACAAATGGCAGA	:	200			
2015.00657|PUUV|N|France|H.s.|02|CILLY|	:	.....	.....	.....	.....	:	200			
2015.00526|PUUV|N|France|H.s.|08|MONTHERME|	:	.....	.....	.....	.....	:	200			
2015.00045|PUUV|N|France|H.s.|59|FOURMIÉS|	:	.....	.....	.....	.....	:	200			
2015.00430|PUUV|N|France|H.s.|02|MONTCORNET|	:	.....	.....	.....	.....	:	200			
2016.00311|PUUV|N|France|H.s.|02|LAON|	:	.....	.....	.....	.....	:	200			
AJ277031.1|PUUV|N|Belgium|M.g.|Montbliart/23Cg/96|	:	.....	.....	.....	.....	:	200			
2016.00326|PUUV|N|France|H.s.|02|LAON|	:	.....	.....	.....	.....	:	200			
2016.00353|PUUV|N|France|H.s.|02|CESSIERES|	:	.....	.....	.....	.....	:	200			
2012.00061|PUUV|N|France|H.s.|02|LANISCOURT|	:	.....	.....	.....	.....	:	200			
2014.00174|PUUV|N|France|H.s.|02|ST-ERME-OUTRE-ET-	:	.....	.....	.....	.....	:	200			
2016.00268|PUUV|N|France|H.s.|02|PRESLES-ET-THIERN	:	.....	.....	.....	.....	:	200			
2015.00660|PUUV|N|France|H.s.|02|VIC-SUR-AISNE|	:	.....	.....	.....	.....	:	200			
2012.00025|PUUV|N|France|H.s.|51|SAINTE-MENEHOULD|	:	.....	.....	.....	.....	:	200			
2015.00665|PUUV|N|France|H.s.|51|REIMS|	:	.....	.....	.....	.....	:	200			
2012.00307|PUUV|N|France|H.s.|54|COLOMBEY-LES-BELL	:	.....	.....	.....	.....	:	200			
2012.00123|PUUV|N|France|H.s.|55|BAR-LE-DUC|	:	.....	.....	.....	.....	:	200			
2012.00278|PUUV|N|France|H.s.|51|REIMS|	:	.....	.....	.....	.....	:	200			
2015.00185|PUUV|N|France|H.s.|68|FELLERING|	:	.....	.....	.....	.....	:	200			
KJ994776.1|PUUV|N|Germany|M.g.|Mu/07/1219|2007|	:	.....	.....	.....	.....	:	200			
2012.00086|PUUV|N|France|H.s.|58|CHEVROCHES|	:	.....	.....	.....	.....	:	200			
KT247595.1|PUUV|N|France|M.g.|45|Orleans/Mg29/2010	:	.....	.....	.....	.....	:	200			
KT247594.1|PUUV|N|France|M.g.|45|Orleans/Mg23/2010	:	.....	.....	.....	.....	:	200			
KY365004.1|PUUV|N|France|M.g.|45|Orleans/NCHA373/2	:	.....	.....	.....	.....	:	200			
2012.00301|PUUV|N|France|H.s.|25|MOUTHE|	:	.....	.....	.....	.....	:	200			
AM695638.1|PUUV|N|France|M.g.|Mignovillard/CgY02/2	:	.....	.....	.....	.....	:	200			
KT247597.1|PUUV|N|France|M.g.|39|Jura/Mg214/2010|	:	.....	.....	.....	.....	:	200			
KT247596.2|PUUV|N|France|M.g.|39|Jura/Mg2/2010|	:	.....	.....	.....	.....	:	200			
2012.00102|PUUV|N|France|H.s.|39|COISERETTE|	:	.....	.....	.....	.....	:	200			
2012.00536|PUUV|N|France|H.s.|39|LA-PESSE|	:	.....	.....	.....	.....	:	200			
2014.00622|PUUV|N|France|H.s.|39|ARBOIS|	:	.....	.....	.....	.....	:	200			
2015.00567|PUUV|N|France|H.s.|70|RIOZ|	:	.....	.....	.....	.....	:	200			
2014.00637|PUUV|N|France|H.s.|25|SAULES|	:	.....	.....	.....	.....	:	200			
2012.00396|PUUV|N|France|H.s.|39|SAINT-CLAUDE|	:	.....	.....	.....	.....	:	200			
2014.00120|PUUV|N|France|H.s.|38|LE-MOUTARET|	:	.....	.....	.....	.....	:	200			
2015.00153|PUUV|N|France|H.s.|73|GREZY-SUR-ISERE|	:	.....	.....	.....	.....	:	200			
2015.00504|PUUV|N|France|H.s.|70|RONCHAMP|	:	.....	.....	.....	.....	:	200			
2016.00275|PUUV|N|France|H.s.|21|JALLANGES|	:	.....	.....	.....	.....	:	200			
2016.00320|PUUV|N|France|H.s.|25|SAINT-VIT|	:	.....	.....	.....	.....	:	200			
2015.00410|PUUV|N|France|H.s.|70|ANGIREY|	:	.....	.....	.....	.....	:	200			
DQ016430.2|PUUV|N|Germany|M.g.|Bavaria/CG33/04|	:	.....	.....	.....	.....	:	200			
DQ016432.2|PUUV|N|Germany|M.g.|Bavaria/CG41/04|	:	.....	.....	.....	.....	:	200			
AY954723.2|PUUV|N|Germany|M.g.|Bavaria-CG34/04|	:	.....	.....	.....	.....	:	200			
AY954722.2|PUUV|N|Germany|M.g.|Bavaria-CG9/04|	:	.....	.....	.....	.....	:	200			
2012.00402|PUUV|N|France|H.s.|60|GOUVIEUX|	:	.....	.....	.....	.....	:	200			
2014.00540|PUUV|N|France|H.s.|60|CHAMBLY|	:	.....	.....	.....	.....	:	200			
AJ314600.1|PUUV|N|Balkan|M.g.|Balkan-1|	:	.....	.....	.....	.....	:	200			
AJ314601.1|PUUV|N|Balkan|M.g.|Balkan-2|	:	.....	.....	.....	.....	:	200			
FN377821.1|PUUV|N|Hungary|M.g.|Mg9/HungaryTR17/00|	:	.....	.....	.....	.....	:	200			
FN377822.1|PUUV|N|Hungary|M.g.|Mg23/HungaryTR17/00	:	.....	.....	.....	.....	:	200			
GQ339473.1|PUUV|N|Sweden|M.g.|Kiviniemi/Mg3/05|	:	.....	.....	.....	.....	:	200			
GQ339474.1|PUUV|N|Sweden|M.g.|Kiviniemi/Mg5/05|	:	.....	.....	.....	.....	:	200			
GQ339475.1|PUUV|N|Sweden|M.g.|Kiviniemi/Mg6/05|	:	.....	.....	.....	.....	:	200			
GQ339476.1|PUUV|N|Sweden|M.g.|Aijajarvi/Mg7/05|	:	.....	.....	.....	.....	:	200			

Lagerqvist N et al. J Clin Microbiol 2016 PUUV_F TGGACCCRGATGACGTTAACPUUV_PACACTGCAAGCAAGYGTGTGTYGTGCACAGTCGTCAC PUUV_R
 Kramski M et al. Clin Chemistry 2007 (end PUUV F) TGGACCCRGATGACGTTAA PUUVTMGB CAACARACAGTGCAGCA (end of PUUV R) TACCGTCT

Evander M et al. J Clin Microbiol 2007 S237 5' GGCAGA

	*	120	*	140	*	160	*	180	*	200
2014.00598|PUUV|N|France|H.s.|59|FOURMIES|	:	TGGACCCAGATGACGTTAA	:	CAAAAAACACATTGCAAGCAAGGCAACAGACAGTGT	:	CAGCACTGGAGGACAAACTTGCAGACTTCAAGCGCAAATGGCAGA	:	:	:	200
GQ339477.1|PUUV|N|Sweden|M.g.|Aijajarvi/Mg9/05|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....C.....
GQ339478.1|PUUV|N|Sweden|M.g.|Jockfall/Mg12/05|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....C.....
GQ339482.1|PUUV|N|Sweden|M.g.|Kalvudden/Mg22/05|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....C.....
GQ339479.1|PUUV|N|Sweden|M.g.|Moskosel/Mg17/05|	:	.....G.....	:	.....C.....	:	.....C.....	:	.....C.....	:	.....G.....
GQ339481.1|PUUV|N|Sweden|M.g.|Ljustrask/Mg20/05|	:	.....G.....	:	.....C.....	:	.....C.....	:	.....C.....	:	.....G.....
GQ339480.1|PUUV|N|Sweden|M.g.|Gyttjea/Mg19/05|	:	.....G.....	:	.....C.....	:	.....T.....	:	.....C.....	:	.....G.....
AY526219.1|PUUV|N|Sweden|Human|Umea/hu|	:	.....G.....	:	.....C.....	:	.....T.....	:	.....C.....	:	.....G.....
AJ223380.1|PUUV|N|Sweden|M.g.|Tavelsjo/Cg81/94|	:	.....G.....	:	.....C.....	:	.....T.....	:	.....C.....	:	.....AG.....
U14137.1|PUUV|N|Bosnia-H.|M.g.|Vranica|	:	..T...G.....	:	.....C.....	:	.....T.....	:	.....C.....	:	.....AG.....
AJ223371.1|PUUV|N|Sweden|M.g.|Huggberget/Cg36/94|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....AG.....
Z48586.1|PUUV|N|Sweden|M.g.|Vindeln/L20Cg/83|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....C.....
AJ223374.1|PUUV|N|Sweden|M.g.|Mellansel/Cg47/94|	:	.....G.....	:	.....C.....	:	.....C.....	:	.....T.....	:	.....G.....
AJ223375.1|PUUV|N|Sweden|M.g.|Mellansel/Cg49/94|	:	.....G.....	:	.....C.....	:	.....T.....	:	.....C.....	:	.....G.....
AJ238791.1|PUUV|N|Denmark|M.g.|Fyn/19|	:	.....T.....	:	.....C.....	:	.....T.....	:	.....G.....	:	.....A.....
AJ278092.1|PUUV|N|Denmark|M.g.|Fyn47|	:	.....T.....	:	.....C.....	:	.....T.....	:	.....C.....	:	.....T.....
AJ278093.1|PUUV|N|Denmark|M.g.|Fyn131|	:	.....T.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....C.....
AJ223368.1|PUUV|N|Norway|M.g.|Eidsvoll/1124v|	:	.....G.....	:	.....C.....	:	.....T.....	:	.....C.....	:	.....A.....
AJ223369.1|PUUV|N|Norway|M.g.|Eidsvoll/Cg1138/87|	:	.....G.....	:	.....C.....	:	.....T.....	:	.....C.....	:	.....A.....
JN657228.1|PUUV|N|Latvia|M.g.|Jelgava/Mg149/2008|	:	.....G.....	:	.....G.....	:	.....C.....	:	.....T.....	:	.....T.....
KX757839.1|PUUV|N|Lithuania|M.g.|LT15/164|2015|	:	.....G.....	:	.....G.....	:	.....C.....	:	.....T.....	:	.....T.....
KX757840.1|PUUV|N|Lithuania|M.g.|LT15/174|2015|	:	.....G.....	:	.....G.....	:	.....C.....	:	.....T.....	:	.....T.....
KX815394.1|PUUV|N|Poland|M.g.|KS13/855|2009|	:	.....G.....	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....
KX757841.1|PUUV|N|Lithuania|M.g.|LT15/201|2015|	:	.....G.....	:	.....T.....	:	.....G.....	:	.....C.....	:	.....A.....
AJ314598.1|PUUV|N|Russia|M.g.|Baltic/49Cg/00|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....A.....	:	.....T.....
AJ314599.1|PUUV|N|Russia|M.g.|Baltic/205Cg/00|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....A.....	:	.....T.....
JN657229.1|PUUV|N|Latvia|M.g.|Madona/Mg99/2008|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....A.....	:	.....T.....
JN657232.1|PUUV|N|Latvia|M.g.|Madona/Mg233/2008|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....G.....
JN657230.1|PUUV|N|Latvia|M.g.|Jelgava/Mg136/2008|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....G.....
JN657231.1|PUUV|N|Latvia|M.g.|Jelgava/Mg140/2008|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....G.....
Z30707.1|PUUV|N|Russia|M.g.|Udmurtia/458Cg/88|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....A.....	:	.....T.....
Z30706.1|PUUV|N|Russia|M.g.|Udmurtia/444Cg/88|	:	.....G.....	:	.....T.....	:	.....C.....	:	.....A.....	:	.....T.....
Z84204.1|PUUV|N|Russia|M.g.|Kazan|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....A.....	:	.....T.....
Z30708.1|PUUV|N|Russia|M.g.|Udmurtia/338Cg/92|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....T.....
Z21497.1|PUUV|N|Russia|M.g.|Udmurtia/894Cg/91|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....T.....
AB433843.2|PUUV|N|Russia|M.g.|Samara_49/CG/2005|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....T.....
AB433845.2|PUUV|N|Russia|M.g.|Samara_94/CG/2005|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....T.....
L11347.1|PUUV|N|Russia|Human|P360|	:	..T...G.....	:	.....G.....	:	.....A.....	:	.....A.....	:	.....A.....
AB297665.2|PUUV|N|Russia|M.g.|DTK/Ufa-97|1997|	:	..T...G.....	:	.....G.....	:	.....A.....	:	.....A.....	:	.....A.....
M32750.1|PUUV|N|Russia|M.g.|CG1820|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....A.....	:	.....A.....
AF442613.1|PUUV|N|Russia|M.g.|CG17/Baskiria-2001|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....A.....	:	.....A.....
KX815395.1|PUUV|N|Poland|M.g.|KS14/118|2009|	:	.....G.....	:	.....T.....	:	.....C.....	:	.....A.....	:	.....C.....
GQ339483.1|PUUV|N|Sweden|M.g.|Bergsjobo/Mg25/05|	:	.....G.....	:	.....C.....	:	.....C.....	:	.....T.....	:	.....C.....
AJ223377.1|PUUV|N|Sweden|M.g.|Solleftea/Cg6/95|	:	.....G.....	:	.....C.....	:	.....T.....	:	.....C.....	:	.....T.....
GQ339484.1|PUUV|N|Sweden|M.g.|Faboviken/Mg26/05|	:	.....G.....	:	.....T.....	:	.....C.....	:	.....C.....	:	.....T.....
GQ339485.1|PUUV|N|Sweden|M.g.|Mangelbo/Mg1/05|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....A.....	:	.....AG.....
GQ339486.1|PUUV|N|Sweden|M.g.|Munga/Mg2/05|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....C.....
GQ339487.1|PUUV|N|Sweden|M.g.|Munga/Mg16/05|	:	.....G.....	:	.....C.....	:	.....A.....	:	.....T.....	:	.....C.....
AJ223376.1|PUUV|N|Sweden|M.g.|Solleftea/Cg3/95|	:	.....G.....	:	.....T.....	:	.....C.....	:	.....C.....	:	.....T.....
AF367071.1|PUUV|N|Russia|M.r.|CRF366|	:	.....T.....	:	.....C.....	:	.....C.....	:	.....T.....	:	.....T.....
AF367064.1|PUUV|N|Russia|M.g.|CG144|	:	.....T.....	:	.....C.....	:	.....C.....	:	.....T.....	:	.....T.....
AF367065.1|PUUV|N|Russia|M.g.|CG168|	:	.....T.....	:	.....C.....	:	.....C.....	:	.....T.....	:	.....T.....
AF367068.1 PUUV N Russia M.g. CG315	:T.....	:C.....	:C.....	:T.....	:T.....
AF367069.1 PUUV N Russia M.r. CRF161	:T.....	:C.....	:C.....	:T.....	:T.....

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 Kramski M et al. Clin Chemistry 2007 (end PUUV F) TGGACCCRGATGACGTTAA PUUVTMGB CAACARACAGTGTACAGCA (end of PUUV R) TACCGTCT

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		*	120		*	140		*	160		*	180		*	200
2014.00598 PUUV N France H.s. 59 FOURMIES	:	TGGACCCAGATGACGTTAACAAAAACACATTGCAAGCAAGGCAACAGACAGTGTGAGCAGTGGAGGACAAACTTGCAGACTTCAAGCGACAAATGGCAGA	:	200											
AF367070.1|PUUV|N|Russia|M.r.|CRF308|	:	T.....C.....C.....T.....T.....C.....A.....A.GAG.....	:	200											
AF367066.1|PUUV|N|Russia|M.g.|CG215|	:	T.....C.....C.....T.....T.....C.....A.....A.GAG.....	:	200											
AF367067.1|PUUV|N|Russia|M.g.|CG222|	:	T.....C.....C.....T.....T.....C.....A.....A.GAG.....	:	200											
Z46942.1|PUUV|N|Finland|M.g.|Puumala/1324Cg/79|	:	C.....C.....A.....T.....T.....C.....A.....A.AG.....	:	200											
Z30702.1|PUUV|N|Finland|M.g.|Evo/12Cg/93|	:	T.....C.A.....C.....A.....T.....C.....A.....A.AGG.....	:	200											
Z30703.1|PUUV|N|Finland|M.g.|Evo/13Cg/93|	:	T.....C.A.....C.....A.....T.....C.....A.....A.AGG.....	:	200											
Z30704.1|PUUV|N|Finland|M.g.|Evo/14Cg/93|	:	T.....C.A.....C.....A.....T.....C.....A.....A.AGG.....	:	200											
Z30705.1|PUUV|N|Finland|M.g.|Evo/15Cg/93|	:	T.....G.C.A.....C.....A.....T.....C.....A.....A.AGG.....	:	200											
Z69985.1|PUUV|N|Finland|M.g.|Virrat/25Cg/95|	:	T.....C.....C.....A.....A.AG.....	:	200											
JN831947.1|PUUV|N|Finland|Pieksamaki/human_lung/20|	:	C.....C.....A.....A.T.....C.....A.....A.AGG.....	:	200											
JN831943.1|PUUV|N|Finland|Pieksamaki/Mg7/2008|	:	C.....C.....A.....A.T.....C.....A.....A.AGG.....	:	200											
JN831950.1|PUUV|N|Finland|Pieksamaki/human_kidney/|	:	C.....C.....A.....A.T.....C.....A.....A.AGG.....	:	200											
JQ319166.1|PUUV|N|Finland|Konnevesi/Mg_O14B/2005|	:	T.C.A.....C.....A.....T.....C.....A.....A.AG.....	:	200											
JQ319169.1|PUUV|N|Finland|Konnevesi/Mg_O27B/2005|	:	T.....C.....C.....A.....T.....C.....A.....A.AG.....	:	200											
JQ319167.1|PUUV|N|Finland|Konnevesi/Mg_O15B/2005|	:	C.....C.....A.....T.....C.....A.....A.AG.....	:	200											
JQ319164.1|PUUV|N|Finland|Konnevesi/Mg_O6B/2005|	:	T.....C.....C.....A.....T.....C.....A.....A.AG.....	:	200											
JQ319165.1|PUUV|N|Finland|Konnevesi/Mg_O9B/2005|	:	T.....C.....C.....A.....T.....C.....A.....A.AG.....	:	200											
JQ319170.1|PUUV|N|Finland|Konnevesi/Mg_O74B/2005|	:	T.....C.A.....C.....A.....T.....C.....A.....A.AG.....	:	200											
JQ319171.1|PUUV|N|Finland|Konnevesi/Mg_M114B/2005|	:	C.....C.....A.....T.....C.....A.....A.AG.....	:	200											
AJ238788.1|PUUV|N|Russia|M.g.|Karhumaki|	:	T.....C.....C.....C.....A.....A.A.G.....	:	200											
AJ238789.1|PUUV|N|Russia|M.g.|Kolodozero|	:	T.....C.....C.....C.....G.....A.....A.AGG.....	:	200											
AJ314597.1|PUUV|N|Finland|M.g.|Pallasjarvi/63Cg/98|	:	T.....C.....C.....T.....C.....A.....A.AGG.....	:	200											
NC_005224.1|PUUV|N|Finland|M.g.|Sotkamo-revu-NCBI2|	:	T.....C.....C.....A.....C.....A.....A.AGG.....	:	200											
AJ238790.1|PUUV|N|Russia|M.g.|Gomselga|	:	T.....C.....C.....C.....A.....A.A.G.....	:	200											
AB010731.1|Hokkaido-V|N|Japan|M.r.|Tobetsu-60Cr-93|	:	G.....C.....C.....A.....T.....A.T.....AG.....	:	200											
AB010730.1|Hokkaido-V|N|Japan|M.r.|Kamiiso-8Cr-95|	:	G.....C.....C.....A.....T.....A.T.....C.....AG.....	:	200											
JX046487.1|Muju-V|N|South-Korea|M.r.|11-5|2011|	:	C.....G.....C.....G.....C.....T.....T.....A.....	:	200											
JX046484.1|Muju-V|N|South-Korea|M.r.|11-4|2011|	:	C.....G.....C.....G.....C.....T.....T.....A.....	:	200											
JX028273.1|Muju-V|N|South-Korea|M.r.|11-1|2011|	:	C.....G.....C.....G.....C.....T.....T.....A.....	:	200											
DQ138128.1|Muju-V|N|South-Korea|E.r.|00-18|	:	G.....C.....G.....C.....A.....T.....T.....A.....	:	200											
DQ138140.1|Muju-V|N|South-Korea|E.r.|99-27|	:	G.....C.....G.....C.....A.....T.....T.....A.....	:	200											
DQ138133.1|Muju-V|N|South-Korea|E.r.|96-1|	:	G.....C.....G.....C.....A.....T.....T.....A.....	:	200											
DQ138142.1|Muju-V|N|South-Korea|E.r.|99-28|	:	G.....C.....G.....C.....A.....T.....T.....A.....	:	200											

Accession	Host	Location	Year	Strain	Sequence	Reference
2014.00598	PUUV	N|France|H.s.	59	FOURMIES	TGCTGTGTCCAGGAAAAAATGGATACTAAACCTACTGACCCGACTGGGATTGAGCCTGATGACCATCTCAAAGAGCGATCAAGCCTCAGATATGGGAAT	300
2014.00233	PUUV	N|France|H.s.	59	FOURMIES		300
2014.00097	PUUV	N|France|H.s.	02	SAINT-MICHEL		300
2014.00488	PUUV	N|France|H.s.	08	SIGNY-LE-PETIT		300
2014.00613	PUUV	N|France|H.s.	59	FOURMIES		300
2015.00402	PUUV	N|France|H.s.	08	CHARLEVILLE-MEZIE	.G..A.	300
2015.00422	PUUV	N|France|H.s.	59	ANOR		300
2015.00488	PUUV	N|France|H.s.	08	SEDAN	.G.	300
2015.00498	PUUV	N|France|H.s.	08	REMILLY-AILLICOUR		300
2016.00295	PUUV	N|France|H.s.	08	CORNY-MACHEROMENI		300
2016.00333	PUUV	N|France|H.s.	59	FOURMIES		300
2016.00345	PUUV	N|France|H.s.	59	FOURMIES		300
2016.00357	PUUV	N|France|H.s.	02	HIRSON		300
2016.00427	PUUV	N|France|H.s.	59	FOURMIES		300
2016.00469	PUUV	N|France|H.s.	02	PREMONTRE	.G.	300
AJ277075.1	PUUV	N|Belgium|M.g.		Montbliart/CG14444	.G..A.	300
2014.00053	PUUV	N|France|H.s.	08	SECHEVAL	.G.	300
KT247593.1	PUUV	N|France|M.g.	08	Ardennes/Mg75/201	.G.	300
KT247592.1	PUUV	N|France|M.g.	08	Ardennes/Mg156/20	.G.	300
2015.00019	PUUV	N|France|H.s.	08	ETEIGNIERES	.G.	300
2016.00239	PUUV	N|France|H.s.	08	VIREUX-MOLHAIN	.G.	300
2015.00329	PUUV	N|France|H.s.	08	BOGNY-SUR-MEUSE	.G.	300
2014.00209	PUUV	N|France|H.s.	08	TREMBLOIS-LES-ROC	.G.	300
2015.00456	PUUV	N|France|H.s.	94	ALFORTVILLE	.G.	300
2012.00018	PUUV	N|France|H.s.	08	ROCROI	.G.	300
AJ277032.1	PUUV	N|Belgium|M.g.		Momignies/47Cg/96	.G.	300
AJ277034.1	PUUV	N|Belgium|M.g.		Couvin/59Cg/97	.G.	300
AJ277033.1	PUUV	N|Belgium|M.g.		Momignies/55Cg/96	.G.	300
2012.00638	PUUV	N|France|H.s.	08	GIVET	.G.	300
2015.00328	PUUV	N|France|H.s.	08	VRIGNE-MEUSE	.C..G..A..C.	300
2015.00419	PUUV	N|France|H.s.	08	DOUZY	.G.	300
2016.00310	PUUV	N|France|H.s.	08	THIN-LE-MOUTIER	.G.	300
AJ277030.1	PUUV	N|Belgium|M.g.		Thuin/33Cg/96	.T..G..A.	300
AJ238779.1	PUUV	N|Germany|M.g.		NRW/Cg-Erft	.G.	300
2014.00276	PUUV	N|France|H.s.	59	LILLE	.G..A.	300
U22423.1	PUUV	N|Belgium|M.g.		CG13891	.C..A..G..G..A.	300
2014.00321	PUUV	N|France|H.s.	59	FOURMIES		300
2015.00457	PUUV	N|France|H.s.	55	REVIGNY-SUR-ORNAI	.G.	300
2013.00250	PUUV	N|France|H.s.	62	VENDIN-LS-BTHUNE	.G..T..G..T.	300
2016.00282	PUUV	N|France|H.s.	59	MORBECQUE	.G..T..C..G.	300
AJ277076.1	PUUV	N|Belgium|M.g.		Montbliart/CG14445	.G..G..A.	300
2014.00153	PUUV	N|France|H.s.	02	BUIRONFOSSE	.G.	300
2014.00171	PUUV	N|France|H.s.	59	SAINT-SAULVE	.G..T..G.	300
2016.00293	PUUV	N|France|H.s.	60	LA-NEUVILLE-SUR-R	.G..A.	300
2014.00499	PUUV	N|France|H.s.	94	CHAMPIGNY-SUR-MAR	.G.	300
2012.00057	PUUV	N|France|H.s.	59	COUSOLRE	.G.	300
2012.00349	PUUV	N|France|H.s.	02	ENGLANCOURT	.G.	300
2014.00135	PUUV	N|France|H.s.	02	ATHIES-SOUS-LAON	.T..T..G..A.	300
2014.00184	PUUV	N|France|H.s.	59	FOURMIES	.G.	300
2016.00182	PUUV	N|France|H.s.	08	BOULZICOURT	.G..A.	300
2016.00286	PUUV	N|France|H.s.	02	TRUCY	.G..C.	300
2016.00325	PUUV	N|France|H.s.	59	AULNOYE-AYMERIES	.G.	300
2016.00452	PUUV	N|France|H.s.	02	LAON	.T..T..G..A.	300
2016.00467	PUUV	N|France|H.s.	02	AISNE	.G..A.	300

	*	220	*	240	*	260	*	280	*	300		
2014.00598|PUUV|N|France|H.s.|59|FOURMIES|	:	TGCTGTGTCAGG	:	TGGATACAAAGCCTACTGAT	:	S263-282	:	(Evander M et al. J Clin Microbiol	:	2007)	:	300
2015.00657|PUUV|N|France|H.s.|02|CILLY|	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	300
2015.00526|PUUV|N|France|H.s.|08|MONTHERME|	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	300
2015.00045|PUUV|N|France|H.s.|59|FOURMIES|	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	300
2015.00430|PUUV|N|France|H.s.|02|MONTCORNET|	:	.....A.....	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	300
2016.00311|PUUV|N|France|H.s.|02|LAON|	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	300
AJ277031.1|PUUV|N|Belgium|M.g.|Montbliart/23Cg/96|	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	300
2016.00326|PUUV|N|France|H.s.|02|LAON|	:	..AT.....	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	300
2016.00353|PUUV|N|France|H.s.|02|CESSIERES|	:	..T.....	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	300
2012.00061|PUUV|N|France|H.s.|02|LANISCOURT|	:	..T.....	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	300
2014.00174|PUUV|N|France|H.s.|02|ST-ERME-OUTRE-ET-	:	..T.....	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	300
2016.00268|PUUV|N|France|H.s.|02|PRESLES-ET-THIERN	:	..T.....	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	300
2015.00660|PUUV|N|France|H.s.|02|VIC-SUR-AISNE|	:	.....T.....	:	.....G.....	:	.....G.....	:	.....G.....	:	.....G.....	:	300
2012.00025|PUUV|N|France|H.s.|51|SAINTE-MENEHOULD|	:	.....G.....	:	.....T.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....G.....
2015.00665|PUUV|N|France|H.s.|51|REIMS|	:	.....G.....	:	.....T.....	:	.....C.....	:	.....G.....	:	.....G.....	:	.....A.....
2012.00307|PUUV|N|France|H.s.|54|COLOMBEY-LES-BELL	:	.....T.....	:	.....A.....	:	.....T.....	:	.....C.....	:	.....G.....	:	.....A.....
2012.00123|PUUV|N|France|H.s.|55|BAR-LE-DUC|	:	.....T.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....T.....	:	.....G.....
2012.00278|PUUV|N|France|H.s.|51|REIMS|	:	.....G.....	:	.....T.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....A.....
2015.00185|PUUV|N|France|H.s.|68|FELLERING|	:	.....G.....	:	.....T.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....G.....
KJ994776.1|PUUV|N|Germany|M.g.|Mu/07/1219|2007|	:	.....G.....	:	.....T.....	:	.....A.....	:	.....C.....	:	.....T.....	:	.....G.....
2012.00086|PUUV|N|France|H.s.|58|CHEVROCHES|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....C.....	:	.....T.....	:	.....G.....
KT247595.1|PUUV|N|France|M.g.|45|Orleans/Mg29/2010	:	.....G.....	:	.....G.....	:	.....G.....	:	.....A.....	:	.....G.....	:	.....T.....
KT247594.1|PUUV|N|France|M.g.|45|Orleans/Mg23/2010	:	.....G.....	:	.....G.....	:	.....G.....	:	.....A.....	:	.....G.....	:	.....T.....
KY365004.1|PUUV|N|France|M.g.|45|Orleans/NCHA373/2	:	.....G.....	:	.....G.....	:	.....G.....	:	.....A.....	:	.....G.....	:	.....T.....
2012.00301|PUUV|N|France|H.s.|25|MOUTHE|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....
AM695638.1|PUUV|N|France|M.g.|Mignovillard/CgY02/2	:	.....G.....	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....
KT247597.1|PUUV|N|France|M.g.|39|Jura/Mg214/2010|	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....T.....
KT247596.2|PUUV|N|France|M.g.|39|Jura/Mg2/2010|	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....T.....
2012.00102|PUUV|N|France|H.s.|39|COISERETTE|	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....T.....
2012.00536|PUUV|N|France|H.s.|39|LA-PESSE|	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....T.....
2014.00622|PUUV|N|France|H.s.|39|ARBOIS|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....
2015.00567|PUUV|N|France|H.s.|70|RIOZ|	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....T.....
2014.00637|PUUV|N|France|H.s.|25|SAULES|	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....T.....
2012.00396|PUUV|N|France|H.s.|39|SAINT-CLAUDE|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....
2014.00120|PUUV|N|France|H.s.|38|LE-MOUTARET|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....
2015.00153|PUUV|N|France|H.s.|73|GREZY-SUR-ISERE|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....
2015.00504|PUUV|N|France|H.s.|70|RONCHAMP|	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....T.....
2016.00275|PUUV|N|France|H.s.|21|JALLANGES|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....
2016.00320|PUUV|N|France|H.s.|25|SAINT-VIT|	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....T.....
2015.00410|PUUV|N|France|H.s.|70|ANGIREY|	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....T.....
DQ016430.2|PUUV|N|Germany|M.g.|Bavaria/CG33/04|	:	.....C.....	:	.....G.....	:	.....T.....	:	.....A.....	:	.....A.....	:	.....T.....
DQ016432.2|PUUV|N|Germany|M.g.|Bavaria/CG41/04|	:	.....C.....	:	.....G.....	:	.....T.....	:	.....A.....	:	.....T.....	:	.....A.....
AY954723.2|PUUV|N|Germany|M.g.|Bavaria-CG34/04|	:	.....C.....	:	.....G.....	:	.....T.....	:	.....A.....	:	.....A.....	:	.....T.....
AY954722.2|PUUV|N|Germany|M.g.|Bavaria-CG9/04|	:	.....C.....	:	.....G.....	:	.....T.....	:	.....A.....	:	.....A.....	:	.....T.....
2012.00402|PUUV|N|France|H.s.|60|GOUVIEUX|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....G.....	:	.....T.....	:	.....G.....
2014.00540|PUUV|N|France|H.s.|60|CHAMBLY|	:	.....G.....	:	.....C.....	:	.....G.....	:	.....G.....	:	.....T.....	:	.....G.....
AJ314600.1|PUUV|N|Balkan|M.g.|Balkan-1|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....C.....	:	.....T.....	:	.....G.....
AJ314601.1|PUUV|N|Balkan|M.g.|Balkan-2|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....
FN377821.1|PUUV|N|Hungary|M.g.|Mg9/HungaryTR17/00|	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....G.....
FN377822.1|PUUV|N|Hungary|M.g.|Mg23/HungaryTR17/00	:	.....G.....	:	.....A.....	:	.....C.....	:	.....G.....	:	.....T.....	:	.....G.....
GQ339473.1|PUUV|N|Sweden|M.g.|Kiviniemi/Mg3/05|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....A.....	:	.....C.....	:	.....G.....
GQ339474.1|PUUV|N|Sweden|M.g.|Kiviniemi/Mg5/05|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....A.....	:	.....T.....	:	.....C.....
GQ339475.1|PUUV|N|Sweden|M.g.|Kiviniemi/Mg6/05|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....A.....	:	.....T.....	:	.....C.....
GQ339476.1|PUUV|N|Sweden|M.g.|Aijajarvi/Mg7/05|	:	.....G.....	:	.....G.....	:	.....A.....	:	.....A.....	:	.....C.....	:	.....G.....

	*	220	*	240	*	260	*	280	*	300		
2014.00598 | PUUV | N | France | H.s. | 59 | FOURMIES |	:										: 300	
GQ339477.1 | PUUV | N | Sweden | M.g. | Ajajarvi/Mg9/05 |	:	G	G	A	A	C	G	AA	GC	A	: 300	
GQ339478.1 | PUUV | N | Sweden | M.g. | Jockfall/Mg12/05 |	:	G	G	A	A	C	G	AA	GC	A	: 300	
GQ339482.1 | PUUV | N | Sweden | M.g. | Kalvudden/Mg22/05 |	:	G	G	A	A	C	G	AA	GC	A	: 300	
GQ339479.1 | PUUV | N | Sweden | M.g. | Moskosel/Mg17/05 |	:	C	G	T	A	C	G	AA	T	GC	A	: 300
GQ339481.1 | PUUV | N | Sweden | M.g. | Ljustyrsk/Mg20/05 |	:	G	G	T	A	C	G	AA	T	GC	A	: 300
GQ339480.1 | PUUV | N | Sweden | M.g. | Gyttjea/Mg19/05 |	:	G	G	T	A	C	G	AA	TT	GC	A	: 300
AY526219.1 | PUUV | N | Sweden | Human | Umea/hu |	:	G	A	T	A	C	G	AA	GC	A	: 300	
AJ223380.1 | PUUV | N | Sweden | M.g. | Tavelnsjo/Cg81/94 |	:	G	A	T	A	C	G	AA	GC	A	: 300	
U14137.1 | PUUV | N | Bosnia-H. | M.g. | Vranica |	:	G	A	T	A	C	G	AA	GC	A	: 300	
AJ223371.1 | PUUV | N | Sweden | M.g. | Huggberget/Cg36/94 |	:	G	A	T	A	C	G	AA	GC	A	: 300	
Z48586.1 | PUUV | N | Sweden | M.g. | Vindeln/L20Cg/83 |	:	G	A	T	A	C	G	AA	GC	T	A	: 300
AJ223374.1 | PUUV | N | Sweden | M.g. | Mellansel/Cg47/94 |	:	A	G	T	A	C	G	AA	T	GC	A	: 300
AJ223375.1 | PUUV | N | Sweden | M.g. | Mellansel/Cg49/94 |	:	A	G	T	A	C	G	AA	T	GC	A	: 300
AJ238791.1 | PUUV | N | Denmark | M.g. | Fyn/19 |	:	C	G	A	A	C	AA	T	C	A	: 300	
AJ278092.1 | PUUV | N | Denmark | M.g. | Fyn47 |	:	C	G	A	A	C	AA	T	A	: 300		
AJ278093.1 | PUUV | N | Denmark | M.g. | Fyn131 |	:	C	G	A	A	C	AA	T	A	: 300		
AJ223368.1 | PUUV | N | Norway | M.g. | Eidsvoll/1124v |	:	C	G	T	A	C	AA	T	A	: 300		
AJ223369.1 | PUUV | N | Norway | M.g. | Eidsvoll/Cg1138/87 |	:	C	G	T	A	C	AA	T	A	: 300		
JN657228.1 | PUUV | N | Latvia | M.g. | Jelgava/Mg149/2008 |	:	C	G	A	A	C	T	G	A	: 300		
KX757839.1 | PUUV | N | Lithuania | M.g. | LT15/164 | 2015 |	:	A	T	G	A	G	A	: 300				
KX757840.1 | PUUV | N | Lithuania | M.g. | LT15/174 | 2015 |	:	A	T	G	A	G	A	: 300				
KX815394.1 | PUUV | N | Poland | M.g. | KS13/855 | 2009 |	:	G	A	C	T	G	A	: 300				
KX757841.1 | PUUV | N | Lithuania | M.g. | LT15/201 | 2015 |	:	T	A	T	G	A	G	: 300				
AJ314598.1 | PUUV | N | Russia | M.g. | Baltic/49Cg/00 |	:	C	G	A	A	C	G	AA	C	A	: 300	
AJ314599.1 | PUUV | N | Russia | M.g. | Baltic/205Cg/00 |	:	C	G	T	A	C	G	AA	TC	A	: 300	
JN657229.1 | PUUV | N | Latvia | M.g. | Madona/Mg99/2008 |	:	C	G	G	A	C	G	AA	T	A	: 300	
JN657232.1 | PUUV | N | Latvia | M.g. | Madona/Mg233/2008 |	:	C	G	G	A	C	G	AA	T	A	: 300	
JN657230.1 | PUUV | N | Latvia | M.g. | Jelgava/Mg136/2008 |	:	C	G	G	A	C	G	AA	T	A	: 300	
JN657231.1 | PUUV | N | Latvia | M.g. | Jelgava/Mg140/2008 |	:	C	G	G	A	C	G	AA	T	A	: 300	
Z30707.1 | PUUV | N | Russia | M.g. | Udmurtia/458Cg/88 |	:	A	T	G	A	T	A	: 300				
Z30706.1 | PUUV | N | Russia | M.g. | Udmurtia/444Cg/88 |	:	C	A	T	G	A	T	A	: 300			
Z84204.1 | PUUV | N | Russia | M.g. | Kazan |	:	C	A	T	G	A	T	A	: 300			
Z30708.1 | PUUV | N | Russia | M.g. | Udmurtia/338Cg/92 |	:	T	C	T	G	A	CT	A	: 300			
Z21497.1 | PUUV | N | Russia | M.g. | Udmurtia/894Cg/91 |	:	C	G	C	A	T	G	A	T	A	: 300	
AB433843.2 | PUUV | N | Russia | M.g. | Samara_49/CG/2005 |	:	C	G	A	A	C	G	AA	T	A	: 300	
AB433845.2 | PUUV | N | Russia | M.g. | Samara_94/CG/2005 |	:	C	G	A	A	C	G	AA	T	A	: 300	
L11347.1 | PUUV | N | Russia | Human | P360 |	:	C	G	A	T	G	A	T	A	: 300		
AB297665.2 | PUUV | N | Russia | M.g. | DTK/Ufa-97 | 1997 |	:	C	G	A	T	G	A	T	A	: 300		
M32750.1 | PUUV | N | Russia | M.g. | CG1820 |	:	C	G	A	T	G	A	T	A	: 300		
AF442613.1 | PUUV | N | Russia | M.g. | CG17/Baskiria-2001 |	:	C	G	A	T	G	A	T	A	: 300		
KX815395.1 | PUUV | N | Poland | M.g. | KS14/118 | 2009 |	:	C	G	A	C	T	G	A	: 300			
GQ339483.1 | PUUV | N | Sweden | M.g. | Bergsjobo/Mg25/05 |	:	C	T	C	G	AA	A	: 300				
AJ223377.1 | PUUV | N | Sweden | M.g. | Solleftea/Cg6/95 |	:	C	T	C	G	AA	A	: 300				
GQ339484.1 | PUUV | N | Sweden | M.g. | Faboviken/Mg26/05 |	:	C	T	C	G	AA	A	: 300				
GQ339485.1 | PUUV | N | Sweden | M.g. | Mangelbo/Mg1/05 |	:	C	G	T	A	A	T	G	: 300			
GQ339486.1 | PUUV | N | Sweden | M.g. | Munga/Mg2/05 |	:	C	T	A	A	T	G	AA	T	A	: 300	
GQ339487.1 | PUUV | N | Sweden | M.g. | Munga/Mg16/05 |	:	C	T	A	A	T	G	AA	T	A	: 300	
AJ223376.1 | PUUV | N | Sweden | M.g. | Solleftea/Cg3/95 |	:	C	T	A	A	T	G	AA	T	A	: 300	
AF367071.1 | PUUV | N | Russia | M.r. | CRF366 |	:	C	G	G	A	C	G	AA	T	T	A	: 300
AF367064.1 | PUUV | N | Russia | M.g. | CG144 |	:	C	G	G	A	C	G	AA	T	T	A	: 300
AF367065.1 | PUUV | N | Russia | M.g. | CG168 |	:	C	G	G	A	C	G	AA	T	T	A	: 300
AF367068.1 | PUUV | N | Russia | M.g. | CG315 |	:	C	G	G	A	C	G	AA	T	T	A	: 300
AF367069.1 | PUUV | N | Russia | M.r. | CRF161 |	:	C	G	G	A	C	G	AA	T	T	A	: 300

Aitichou M et al J Virol Meth 2005 HANTAV1U GGGVVCARACAGCWGAYT PUU1P TTCACAATTCCTATCA
 * 320 * 340 * 360 * 380 * 400

2014.00598|PUUV|N|France|H.s.|59|FOURMIES| : GTCCTTGATGTGAATGCCATTGATATAGAAGAACCAAGTGGTCAAACAGCAGACTGGTATACAATTGGAGTGTATGTTATAGGCTTCACACTCCCCATCA : 400
 GQ339477.1|PUUV|N|Sweden|M.g.|Aijajarvi/Mg9/05| :T.....C.....G.....C.G.....T.....T.C.....A.....A.....G.....A.T.T. : 400
 GQ339478.1|PUUV|N|Sweden|M.g.|Jockfall/Mg12/05| :T.....C.....G.....A.....T.....T.....C.....A.....A.....G.....A.T.T. : 400
 GQ339482.1|PUUV|N|Sweden|M.g.|Kalvudden/Mg22/05| :C.....C.....G.....C.G.....T.....T.A.....A.....A.....G.....A.T.T. : 400
 GQ339479.1|PUUV|N|Sweden|M.g.|Moskosel/Mg17/05| :T.C.C.....G.....G.....T.....T.....A.....G.T.....G.T.T. : 400
 GQ339481.1|PUUV|N|Sweden|M.g.|Ljustrask/Mg20/05| :T.C.C.....G.....G.....T.....T.....A.....G.T.....G.T.T. : 400
 GQ339480.1|PUUV|N|Sweden|M.g.|Gyttjea/Mg19/05| :T.....C.....G.....G.....T.....T.....A.....G.T.....G.T.T. : 400
 AY526219.1|PUUV|N|Sweden|Human|Umea/hu| :C.....C.....T.....T.....A.....G.T.....A.T.T. : 400
 AJ223380.1|PUUV|N|Sweden|M.g.|Tavelsjo/Cg81/94| :G.G.....C.....T.....A.....G.....G.T.....G.T.T. : 400
 U14137.1|PUUV|N|Bosnia-H.|M.g.|Vranica| :G.G.....C.....T.....A.....G.....G.T.....G.T.T. : 400
 AJ223371.1|PUUV|N|Sweden|M.g.|Huggberget/Cg36/94| :A.....G.....T.....A.T.T. : 400
 Z48586.1|PUUV|N|Sweden|M.g.|Vindeln/L20Cg/83| :G.....C.....C.....G.....G.....A.T.T. : 400
 AJ223374.1|PUUV|N|Sweden|M.g.|Mellansel/Cg47/94| :T.....G.....G.T.....A.T.T. : 400
 AJ223375.1|PUUV|N|Sweden|M.g.|Mellansel/Cg49/94| :T.....G.....G.T.....A.T.T. : 400
 AJ238791.1|PUUV|N|Denmark|M.g.|Fyn/19| :A.....A.C.T.....G.....G.G.....T.....T.A.....A.....G.T.T.T.....T.....T. : 400
 AJ278092.1|PUUV|N|Denmark|M.g.|Fyn47| :A.....T.A.C.T.....G.....G.G.....T.....C.A.....A.....G.T.T.T.....T.....T. : 400
 AJ278093.1|PUUV|N|Denmark|M.g.|Fyn131| :A.....T.A.C.T.....G.....G.G.....T.....C.A.....A.....G.T.T.T.....T.....T. : 400
 AJ223368.1|PUUV|N|Norway|M.g.|Eidsvoll/1124v| :A.....T.G.....G.....C.....C.....G.T.....T.....G.T. : 400
 AJ223369.1|PUUV|N|Norway|M.g.|Eidsvoll/Cg1138/87| :T.G.....G.....C.....C.....G.T.....T.....G.T. : 400
 JN657228.1|PUUV|N|Latvia|M.g.|Jelgava/Mg149/2008| :T.C.....T.....G.....C.....A.....A.....C.T.G.T.....T.T. : 400
 KX757839.1|PUUV|N|Lithuania|M.g.|LT15/164|2015| :A.....T.....T.....G.....C.G.....A.G.A.....G.T.T.....T.T. : 400
 KX757840.1|PUUV|N|Lithuania|M.g.|LT15/174|2015| :A.....T.....T.....G.....C.G.....A.....A.....G.T.T.T.....T.T. : 400
 KX815394.1|PUUV|N|Poland|M.g.|KS13/855|2009| :A.....T.....C.T.G.G.....C.G.....T.....A.G.....G.T.G.T.....T.T. : 400
 KX757841.1|PUUV|N|Lithuania|M.g.|LT15/201|2015| :A.....T.....T.....G.....C.G.....A.G.A.....G.T.T.....T.T. : 400
 AJ314598.1|PUUV|N|Russia|M.g.|Baltic/49Cg/00| :A.....T.....C.T.....G.....T.....T.....A.....G.....G.T.....T.T. : 400
 AJ314599.1|PUUV|N|Russia|M.g.|Baltic/205Cg/00| :A.....T.....C.T.....G.....T.....C.T.A.....C.....G.....A.T.....T.T. : 400
 JN657229.1|PUUV|N|Latvia|M.g.|Madona/Mg99/2008| :A.....T.....G.....T.A.G.T.....G.A.T.T.T.A..... : 400
 JN657232.1|PUUV|N|Latvia|M.g.|Madona/Mg233/2008| :A.....T.....G.....T.A.G.T.....G.A.T.T.T.A..... : 400
 JN657230.1|PUUV|N|Latvia|M.g.|Jelgava/Mg136/2008| : ..T.....A.....T.....G.....C.A.G.C.....G.T.T.....A..... : 400
 JN657231.1|PUUV|N|Latvia|M.g.|Jelgava/Mg140/2008| : ..T.....A.....T.....G.....C.A.G.C.....G.T.T.....A..... : 400
 Z30707.1|PUUV|N|Russia|M.g.|Udmurtia/458Cg/88| :A.....C.C.....G.....T.....T.....C.....A.....T.T.A.T..... : 400
 Z30706.1|PUUV|N|Russia|M.g.|Udmurtia/444Cg/88| :A.....C.C.....G.....T.....T.....C.....G.....T.T.A.T..... : 400
 Z84204.1|PUUV|N|Russia|M.g.|Kazan| :A.....C.C.....G.....T.....T.....C.....A.....T.T.A.T..... : 400
 Z30708.1|PUUV|N|Russia|M.g.|Udmurtia/338Cg/92| :A.....C.C.....G.....T.....T.....C.....A.....T.T.A.T..... : 400
 Z21497.1|PUUV|N|Russia|M.g.|Udmurtia/894Cg/91| :A.....C.C.....G.....T.....T.....C.....A.....T.T.A.T..... : 400
 AB433843.2|PUUV|N|Russia|M.g.|Samara_49/CG/2005| :A.....C.T.G.....G.....T.....T.....C.....G.....G.....A.T..... : 400
 AB433845.2|PUUV|N|Russia|M.g.|Samara_94/CG/2005| :A.....C.T.G.....G.....T.....T.....C.....G.....G.....A.T..... : 400
 L11347.1|PUUV|N|Russia|Human|P360| :T.....C.T.....C.G.....T.....T.....C.....C.....A.....G.....A.T.T. : 400
 AB297665.2|PUUV|N|Russia|M.g.|DTK/Ufa-97|1997| :T.....C.T.....C.G.....T.....T.....C.....A.....G.....A.T.T. : 400
 M32750.1|PUUV|N|Russia|M.g.|CG1820| :T.....C.T.....C.G.....T.....T.....C.....C.....A.....G.....A.T.T. : 400
 AF442613.1|PUUV|N|Russia|M.g.|CG17/Baskiria-2001| :T.....C.T.....C.G.....T.....T.....C.....C.....A.....G.....A.T.T. : 400
 KX815395.1|PUUV|N|Poland|M.g.|KS14/118|2009| :A.....A.....T.....G.....C.....T.....C.A.G.C.....A.....G.....A.T.T. : 400
 GQ339483.1|PUUV|N|Sweden|M.g.|Bergsjobo/Mg25/05| :T.....T.....T.....T.....T.....G.....T.....T.T. : 400
 AJ223377.1|PUUV|N|Sweden|M.g.|Solleftea/Cg6/95| :T.....C.....T.....T.....T.....T.....G.....T.....T.T. : 400
 GQ339484.1|PUUV|N|Sweden|M.g.|Faboviken/Mg26/05| :T.....G.G.....C.....T.....T.....T.....C.....A.....T.....T.T. : 400
 GQ339485.1|PUUV|N|Sweden|M.g.|Mangelbo/Mg1/05| :T.....T.....G.....T.....T.....T.....T.....G.....T.....T.T. : 400
 GQ339486.1|PUUV|N|Sweden|M.g.|Munga/Mg2/05| :A.....T.....T.....G.....T.....T.....T.....T.....G.....T.....T.T. : 400
 GQ339487.1|PUUV|N|Sweden|M.g.|Munga/Mg16/05| :T.....T.....G.....T.....T.....T.....T.....T.....G.....T.....T.T. : 400
 AJ223376.1|PUUV|N|Sweden|M.g.|Solleftea/Cg3/95| :T.....T.....C.....T.....T.....T.....T.....C.....G.....T.....T.T. : 400
 AF367071.1|PUUV|N|Russia|M.r.|CRF366| :A.....T.G.....C.C.G.....T.....C.A.A.T.....G.....T.....T. : 400
 AF367064.1|PUUV|N|Russia|M.g.|CG144| :A.....T.G.....C.C.G.....T.....C.A.A.T.....G.....T.....T. : 400
 AF367065.1|PUUV|N|Russia|M.g.|CG168| :A.....T.G.....C.C.G.....T.....C.A.A.T.....A.....T.....T. : 400
 AF367068.1|PUUV|N|Russia|M.g.|CG315| :A.....T.G.....C.C.G.....T.....C.A.A.T.....G.....T.....T. : 400
 AF367069.1|PUUV|N|Russia|M.r.|CRF161| :A.....T.G.....C.C.G.....T.....C.A.A.T.....A.....T.....T. : 400

Aitichou M et al J Virol Meth 2005 HANTAV1U GWGGVCARACAGCWGAYT PUU1P TTCACAATTCCTATCA

	*	320	*	340	*	360	*	380	*	400	
2014.00598|PUUV|N|France|H.s.|59|FOURMIÉS|	:	GTCCTTGATGTGAATGCCATTGATATAGAAGAACCAAGTGGTCAAACAGCAGACTGGTATACAATTGGAGTGTATGTTATAGGCTTCACACTCCCCATCA	:	400							
AF367070.1|PUUV|N|Russia|M.r.|CRF308|	:	.....A.....T.G.....C..C.G.....T.....C..A.....T.....G.....T.....T.....	:	400							
AF367066.1|PUUV|N|Russia|M.g.|CG215|	:	.....A.....T.G.....C..C.G.....T.....C..A.....T.....G.....T.....T.....	:	400							
AF367067.1|PUUV|N|Russia|M.g.|CG222|	:	.....A.....T.G.....C..C.G.....T.....C..A.....T.....G.....T.....T.....	:	400							
Z46942.1|PUUV|N|Finland|M.g.|Puumala/1324Cg/79|	:	.....A..C.....T.....C.....T.....T.....A.....A.....A.....T.....	:	400							
Z30702.1|PUUV|N|Finland|M.g.|Evo/12Cg/93|	:	.....A.....T.G.....T.....T.....A.....A.....A.....T.....	:	400							
Z30703.1|PUUV|N|Finland|M.g.|Evo/13Cg/93|	:	.....A.....T.G.....T.....T.....A.....A.....A.....T.....	:	400							
Z30704.1|PUUV|N|Finland|M.g.|Evo/14Cg/93|	:	.....A.....T.G.....T.....T.....A.....A.....A.....T.....	:	400							
Z30705.1|PUUV|N|Finland|M.g.|Evo/15Cg/93|	:	...T.C.....A.....T.G.....T.....T.....A.....A.....A.....T.....	:	400							
Z69985.1|PUUV|N|Finland|M.g.|Virrat/25Cg/95|	:	.....A.....T.G.....C.....T.....T.....G..G..A.....T..T.....	:	400							
JN831947.1|PUUV|N|Finland|Pieksamaki/human_lung/20|	:	.....C..A.....T.G.....C.....T.....G.....A.....T..T.....	:	400							
JN831943.1|PUUV|N|Finland|Pieksamaki/Mg7/2008|	:	.....C..A.....T.G.....C.....T.....G.....A.....T..T.....	:	400							
JN831950.1|PUUV|N|Finland|Pieksamaki/human_kidney/|	:	.....C..A.....T.G.....C.....T.....G.....A.....T..T.....	:	400							
JQ319166.1|PUUV|N|Finland|Konnevesi/Mg_O14B/2005|	:	.....A.....T.G.....C..G.....T.....T.....G.....A.....T.....	:	400							
JQ319169.1|PUUV|N|Finland|Konnevesi/Mg_O27B/2005|	:	.....A.....T.G.....C..G.....T.....T.....G.....A.....T.....	:	400							
JQ319167.1|PUUV|N|Finland|Konnevesi/Mg_O15B/2005|	:	.....A.....T.....C..G.....T.....T.....G.....A.....T.....	:	400							
JQ319164.1|PUUV|N|Finland|Konnevesi/Mg_O6B/2005|	:	.....A.....T.G.....C..G.....T.....T.....G.....A.....T.....	:	400							
JQ319165.1|PUUV|N|Finland|Konnevesi/Mg_O9B/2005|	:	.....A.....T.G.....C..G.....T.....T.....G.....A.....T.....	:	400							
JQ319170.1|PUUV|N|Finland|Konnevesi/Mg_O74B/2005|	:	.....A.....T.G.....C..G.....T.....T.....G.....A.....T.....	:	400							
JQ319171.1|PUUV|N|Finland|Konnevesi/Mg_M114B/2005|	:	.....A.....T.....C..G.....T.....T.....G.....A.....T.....	:	400							
AJ238788.1|PUUV|N|Russia|M.g.|Karhumaki|	:	.....C.....A.....T.G.....C.....T.....C.....T.....A.....A.....T..T..T..	:	400							
AJ238789.1|PUUV|N|Russia|M.g.|Kolodozero|	:	.....A.....T.G.....G.....C.....T.....C.....A.....A..T.....T.....T..	:	400							
AJ314597.1|PUUV|N|Finland|M.g.|Pallasjarvi/63Cg/98|	:	.....A.....T.G.....C.....G.....T.....A.....A.....T.....T.....	:	400							
NC_005224.1|PUUV|N|Finland|M.g.|Sotkamo-revu-NCBI2|	:	.....A.....A.....C..T.....C.....T.....G.....G.....T.....T.....	:	400							
AJ238790.1|PUUV|N|Russia|M.g.|Gomselga|	:	.....C.....A.....T.G..C.....C.....T.....C.....T.....A.....G.....T.....T.....	:	400							
AB010731.1|Hokkaido-V|N|Japan|M.r.|Tobetsu-60Cr-93|	:	.....A.....C.....G..T.....T.....C..A.....A..A.....G..T.....A..T..T..	:	400							
AB010730.1|Hokkaido-V|N|Japan|M.r.|Kamiiso-8Cr-95|	:	.....A.....C.....G..T.....T.....C..A.....A..A.....G..T.....A..T..T..	:	400							
JX046487.1|Muju-V|N|South-Korea|M.r.|11-5|2011|	:	.....A..A..C.....C.....G..A..CA..C..T..G..T..T..A..G..TG..	:	400							
JX046484.1|Muju-V|N|South-Korea|M.r.|11-4|2011|	:	.....A..A..C.....C.....G..A..CA..C..T..G..T..T..A..G..TG..	:	400							
JX028273.1|Muju-V|N|South-Korea|M.r.|11-1|2011|	:	.....A..A..C.....C.....G..A..CA..C..T..G..T..T..A..G..TG..	:	400							
DQ138128.1|Muju-V|N|South-Korea|E.r.|00-18|	:	.....A..A.....T.....T.....C..T..G..T.....G..A..TG..	:	400							
DQ138140.1|Muju-V|N|South-Korea|E.r.|99-27|	:	.....A..A.....G.....T.....T.....C..T..G..T.....G..A..TG..	:	400							
DQ138133.1 Muju-V N South-Korea E.r. 96-1	:A..A.....T.....T.....C..C..G..T.....G..A..TG..	:	400							
DQ138142.1 Muju-V N South-Korea E.r. 99-28	:A..A.....G.....T.....T.....C..T..G..T.....G..A..TG..	:	400							

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	*	420	*	440	*	460	*	480	*	500	
2014.00598 PUUV N France H.s. 59 FOURMIES	:	TCCTGAAGGCTTTATATATGTTGTCAACACGCTGGGAGACAAACTGTGAGGAAAACAAGGgACTCGTATCCGTTTTAAAGATGACACTTCCTTTGAGGA	:	500							
2014.00233|PUUV|N|France|H.s.|59|FOURMIES|	:	.....T.....	:	500						
2014.00097|PUUV|N|France|H.s.|02|SAINT-MICHEL|	:	.....A.....	:	500						
2014.00488|PUUV|N|France|H.s.|08|SIGNY-LE-PETIT|	:	.....	:	500						
2014.00613|PUUV|N|France|H.s.|59|FOURMIES|	:	.....	:	500						
2015.00402|PUUV|N|France|H.s.|08|CHARLEVILLE-MEZIE|	:	.....C..G.....A.....	:	500						
2015.00422|PUUV|N|France|H.s.|59|ANOR|	:	.....	:	500						
2015.00488|PUUV|N|France|H.s.|08|SEDAN|	:	.....C.....A.....T.....	:	500						
2015.00498|PUUV|N|France|H.s.|08|REMILLY-AILLICOUR|	:	.....	:	500						
2016.00295|PUUV|N|France|H.s.|08|CORNLY-MACHEROMENI|	:	.....	:	500						
2016.00333|PUUV|N|France|H.s.|59|FOURMIES|	:	.....	:	500						
2016.00345|PUUV|N|France|H.s.|59|FOURMIES|	:	.....	:	500						
2016.00357|PUUV|N|France|H.s.|02|HIRSON|	:	.....	:	500						
2016.00427|PUUV|N|France|H.s.|59|FOURMIES|	:	.....	:	500						
2016.00469|PUUV|N|France|H.s.|02|PREMONTRE|	:	.....A.....A..A..G.....T.....	:	500						
AJ277075.1|PUUV|N|Belgium|M.g.|Montbliart/CG14444|	:	.....C.....A.....C.....	:	500						
2014.00053|PUUV|N|France|H.s.|08|SECHEVAL|	:	.....C.....A.....T.....	:	500						
KT247593.1|PUUV|N|France|M.g.|08|Ardennes/Mg75/201|	:	.....A.....C.....C.....	:	500						
KT247592.1|PUUV|N|France|M.g.|08|Ardennes/Mg156/20|	:	.....A.....C.....C.....	:	500						
2015.00019|PUUV|N|France|H.s.|08|ETEIGNIERES|	:	.....G.....A.....A.....C.....	:	500						
2016.00239|PUUV|N|France|H.s.|08|VIREUX-MOLHAIN|	:	.....G.....A.....A.....C.....	:	500						
2015.00329|PUUV|N|France|H.s.|08|BOGNY-SUR-MEUSE|	:	.....G.....A.....A.....C.....C.....	:	500						
2014.00209|PUUV|N|France|H.s.|08|TREMBLOIS-LES-ROC|	:	.....G.....A.....A.....C.....C.....	:	500						
2015.00456|PUUV|N|France|H.s.|94|ALFORTVILLE|	:	.....G.....A.....A.....C.....C..A.....	:	500						
2012.00018|PUUV|N|France|H.s.|08|ROCROI|	:	.....T.....G.....A.....A.....C.....C.....	:	500						
AJ277032.1|PUUV|N|Belgium|M.g.|Momignies/47Cg/96|	:	.....G.....A.....C.....C.....	:	500						
AJ277034.1|PUUV|N|Belgium|M.g.|Couvin/59Cg/97|	:	.....G.....A.....A.....C.....C.....	:	500						
AJ277033.1|PUUV|N|Belgium|M.g.|Momignies/55Cg/96|	:	.....G.....A.....C.....C.....	:	500						
2012.00638|PUUV|N|France|H.s.|08|GIVET|	:	.....G.....A.....C.....C.....	:	500						
2015.00328|PUUV|N|France|H.s.|08|VRIGNE-MEUSE|	:	.....A.....C.....C.....	:	500						
2015.00419|PUUV|N|France|H.s.|08|DOUZY|	:	.....A.....C.....	:	500						
2016.00310|PUUV|N|France|H.s.|08|THIN-LE-MOUTIER|	:	.....G.....	:	500						
AJ277030.1|PUUV|N|Belgium|M.g.|Thuin/33Cg/96|	:	.....A.....C.....C.....	:	500						
AJ238779.1|PUUV|N|Germany|M.g.|NRW/Cg-Erft|	:	.....C..G.....G.....A..G.....C..C.....T..A.....A.....	:	500						
2014.00276|PUUV|N|France|H.s.|59|LILLE|	:	.....A.....C..G.....T.....T.....	:	500						
U22423.1|PUUV|N|Belgium|M.g.|CG13891|	:	.....C..G.....A.....A.....C..T.....C.....T.....	:	500						
2014.00321|PUUV|N|France|H.s.|59|FOURMIES|	:	.....T.....	:	500						
2015.00457|PUUV|N|France|H.s.|55|REVIGNY-SUR-ORNAI|	:	.....A.....C..A.....G.....A..A.....T.....	:	500						
2013.00250|PUUV|N|France|H.s.|62|VENDIN-LS-BTHUNE|	:	.....T.....C.....A.....T.....T.....	:	500						
2016.00282|PUUV|N|France|H.s.|59|MORBECQUE|	:	.....T.....A.....T.....C.....T.....	:	500						
AJ277076.1|PUUV|N|Belgium|M.g.|Montbliart/CG14445|	:	.....C.....A.....C.....	:	500						
2014.00153|PUUV|N|France|H.s.|02|BUIRONFOSSE|	:	.....CC.....A.....C.....	:	500						
2014.00171|PUUV|N|France|H.s.|59|SAINT-SAULVE|	:	.....T.....G.....T..A.....T.....C.....T.....T.....	:	500						
2016.00293|PUUV|N|France|H.s.|60|LA-NEUVILLE-SUR-R|	:	.....T.....A..A.....C.....T.....T.....	:	500						
2014.00499|PUUV|N|France|H.s.|94|CHAMPIGNY-SUR-MAR|	:	.....C.....A.....C.....	:	500						
2012.00057|PUUV|N|France|H.s.|59|COUSOLRE|	:	.....C.....A.....C.....	:	500						
2012.00349|PUUV|N|France|H.s.|02|ENGLANCOURT|	:	.....C.....A.....C.....	:	500						
2014.00135|PUUV|N|France|H.s.|02|ATHIES-SOUS-LAON|	:	.....C.....A.....C.....T..C.....	:	500						
2014.00184|PUUV|N|France|H.s.|59|FOURMIES|	:	.....C.....A.....C.....	:	500						
2016.00182|PUUV|N|France|H.s.|08|BOULZICOURT|	:	.....C.....A.....C.....	:	500						
2016.00286|PUUV|N|France|H.s.|02|TRUCY|	:	.....C.....A.....C.....	:	500						
2016.00325|PUUV|N|France|H.s.|59|AULNOYE-AYMERIES|	:	.....C.....A.....C.....	:	500						
2016.00452 PUUV N France H.s. 02 LAON	:C.....A.....C.....T..C.....	:	500							
2016.00467 PUUV N France H.s. 02 AISNE	:C.....A.....C.....	:	500							

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	*	420	*	440	*	460	*	480	*	500	
2014.00598 PUUV N France H.s. 59 FOURMIES	:	TCCTGAAGGCTTTATATATGTTGTCAACACGTTGGGAGACAAACTGTGAAGGAAAACAAGGgACTCGTATCCGTTTTAAAGATGACACTTCCTTTGAGGA	:	500							
2015.00657|PUUV|N|France|H.s.|02|CILLY|	:	.....A.G.....A.G.....T.....C.....T.....	:	500						
2015.00526|PUUV|N|France|H.s.|08|MONTHERME|	:	.....C.....A.....A.....	:	500						
2015.00045|PUUV|N|France|H.s.|59|FOURMIES|	:	.....C.....A.....A.....C.....	:	500						
2015.00430|PUUV|N|France|H.s.|02|MONTCORNET|	:	.....C.....A.....A.....A.....	:	500						
2016.00311|PUUV|N|France|H.s.|02|LAON|	:	.....C.C.....A.....C.....C.....	:	500						
AJ277031.1|PUUV|N|Belgium|M.g.|Montbliart/23Cg/96|	:	.....C.....A.....A.....T.....	:	500						
2016.00326|PUUV|N|France|H.s.|02|LAON|	:	.....C.....A.....C.....C.....	:	500						
2016.00353|PUUV|N|France|H.s.|02|CESSIERES|	:	.....C.....A.....C.....C.....	:	500						
2012.00061|PUUV|N|France|H.s.|02|LANISCOURT|	:	.....C.....A.....C.....C.....	:	500						
2014.00174|PUUV|N|France|H.s.|02|ST-ERME-OUTRE-ET-	:	.....C.....A.....C.....C.....	:	500						
2016.00268|PUUV|N|France|H.s.|02|PRESLES-ET-THIERN	:	.....C.....A.....C.....C.....	:	500						
2015.00660|PUUV|N|France|H.s.|02|VIC-SUR-AISNE|	:	.....G.....A.....A.....A.....C.....T.....T.....	:	500						
2012.00025|PUUV|N|France|H.s.|51|SAINTE-MENEHOULD|	:	..T.A...CC..C...A...A...T...A.A...T.A.C...T.A.T.....	:	500							
2015.00665|PUUV|N|France|H.s.|51|REIMS|	:	..TT.A...CC...C...A.G...A...T...A.A...T.A...T.A.T.....	:	500							
2012.00307|PUUV|N|France|H.s.|54|COLOMBEY-LES-BELL	:	..T...C...C.A...A.G.G...A...T...A...T.A...T.A.T.....	:	500							
2012.00123|PUUV|N|France|H.s.|55|BAR-LE-DUC|	:	..T.A...CC...C...A...A.G.T...A.A...T.A...T.A.T.....	:	500							
2012.00278|PUUV|N|France|H.s.|51|REIMS|	:	..TT.A...CC.G.C...A...A.G.T...A...T.A...T.A.T.C.....	:	500							
2015.00185|PUUV|N|France|H.s.|68|FELLERING|	:	..T.A...CC...C...A...A...T...A.A...T.A...G...T.A.....	:	500							
KJ994776.1|PUUV|N|Germany|M.g.|Mu/07/1219|2007|	:	.....A.C.....A.....G...A...T...A...T.G...G...T.A.....	:	500						
2012.00086|PUUV|N|France|H.s.|58|CHEVROCHES|	:	...A...C.G...C.T...A...G...A.A...g.a...c.T.A...T.A.T...A...:	:	500							
KT247595.1|PUUV|N|France|M.g.|45|Orleans/Mg29/2010	:	...A...CC.G.C...C.T...A...G...A...G.A...T.A...T.A.T...A...:	:	500							
KT247594.1|PUUV|N|France|M.g.|45|Orleans/Mg23/2010	:	...A...CC.G.C...C.T...A...G...A...G.A...T.A...T.A.T...A...:	:	500							
KY365004.1|PUUV|N|France|M.g.|45|Orleans/NCHA373/2	:	...A.A.CC.G...C.T...A...G...A...G.A...T.A...T.A.T...A...:	:	500							
2012.00301|PUUV|N|France|H.s.|25|MOUTHE|	:	..T.A...C...C...A...G...A...T.G.A.C.C.T.A...G...T.A...A...:	:	500							
AM695638.1|PUUV|N|France|M.g.|Mignovillard/CgY02/2	:	..T.A...C...C...A...G...A...T.G.A.C.C.T.A...G...T.A...A...:	:	500							
KT247597.1|PUUV|N|France|M.g.|39|Jura/Mg214/2010|	:	..T...C...C...A...G...A...T.G.A.C.C.T.A...G...T.A...A...:	:	500							
KT247596.2|PUUV|N|France|M.g.|39|Jura/Mg2/2010|	:	..T...C...C...A...G...A...T.G.A.C.C.T.A...G...T.A...A...:	:	500							
2012.00102|PUUV|N|France|H.s.|39|COISERETTE|	:	..T.A...C.G.C...A...G.C.A...T.G.a.c.c.T.A...G...T.A...A...:	:	500							
2012.00536|PUUV|N|France|H.s.|39|LA-PESSE|	:	..T.A...C.G.C...A...G.C.A...T.G.A.C.C.T.A...G...T.A...A...:	:	500							
2014.00622|PUUV|N|France|H.s.|39|ARBOIS|	:	..T.A...C...C...A...G...A...T.G.A.C.C.T.A...G...T.A...A...:	:	500							
2015.00567|PUUV|N|France|H.s.|70|RIOZ|	:	..T.A...C...C...A...A...T.G.A.C.C.T.A...G...T.A...A...:	:	500							
2014.00637|PUUV|N|France|H.s.|25|SAULES|	:	..T.A...C...C...A...A...T.G.A.C.C.T.A...g...T.A...A...:	:	500							
2012.00396|PUUV|N|France|H.s.|39|SAINT-CLAUDE|	:	..T.A...C.G.C...A...G...A...T.G.a.c.c.T.A...G...T.A...A...:	:	500							
2014.00120|PUUV|N|France|H.s.|38|LE-MOUTARET|	:	..T.A...C...C...A...G...A...T.G.A.C...T.A...G...T.A...A...:	:	500							
2015.00153|PUUV|N|France|H.s.|73|GREZY-SUR-ISERE|	:	..T.A...C...C...A...G...A...T.G.A.C...T.A...G...T.A...A...:	:	500							
2015.00504|PUUV|N|France|H.s.|70|RONCHAMP|	:	..T...A.A.C...A...A...G.T.G...C.A.T.A...G...T.A...A...:	:	500							
2016.00275|PUUV|N|France|H.s.|21|JALLANGES|	:	..T.A...C...C...A...G...A...T.G.A.C.C.T.A...T.A...A...:	:	500							
2016.00320|PUUV|N|France|H.s.|25|SAINT-VIT|	:	..T...C...C...A...G...A...T.G.A.C.C.T.A...g...T.A...A...:	:	500							
2015.00410|PUUV|N|France|H.s.|70|ANGIREY|	:	..T.A...A...C...A...A...G...A.A.G.T.G...C.A.T.A...G...T.A...A...:	:	500							
DQ016430.2|PUUV|N|Germany|M.g.|Bavaria/CG33/04|	:	..T...C.G...A...C...G...G...A.T.G...T.C.A...:	:	500							
DQ016432.2|PUUV|N|Germany|M.g.|Bavaria/CG41/04|	:	..T.A...C.G...A...C...G...G...A...T.G...T.A...:	:	500							
AY954723.2|PUUV|N|Germany|M.g.|Bavaria-CG34/04|	:	..T...C.G...A...C...G...G...T...C...G...T...A...:	:	500							
AY954722.2|PUUV|N|Germany|M.g.|Bavaria-CG9/04|	:	..T...C.G...A...C...G...G...G...C...G...T...A...:	:	500							
2012.00402|PUUV|N|France|H.s.|60|GOUVIEUX|	:	...A...C...C...A...G...T...C.TA.G...t...a...:	:	500							
2014.00540|PUUV|N|France|H.s.|60|CHAMBLY|	:	...A...C...C.C.A...G...T...C.TA.G...T...A...:	:	500							
AJ314600.1|PUUV|N|Balkan|M.g.|Balkan-1|	:	..A...AC.C...A...A...G...A...T...A.A.C.A...G...T.A.A...:	:	500							
AJ314601.1|PUUV|N|Balkan|M.g.|Balkan-2|	:	..T...AC.C...A...A...G...A.A...T...A.A.C.A...G...T.A.A...:	:	500							
FN377821.1|PUUV|N|Hungary|M.g.|Mg9/HungaryTR17/00|	:	..A...AC.C...A...A...G...A...T...A.A.C.A...C.G...T.A.A...:	:	500							
FN377822.1|PUUV|N|Hungary|M.g.|Mg23/HungaryTR17/00	:	..A...AC.C.T...A...A...G...A.A...T...A.A.C.A...G...T.A.A...:	:	500							
GQ339473.1|PUUV|N|Sweden|M.g.|Kiviniemi/Mg3/05|	:	..TT.A...CC.T.C...C.A...A.G...T...G...A.A.C...C.C...T.A...:	:	500							
GQ339474.1|PUUV|N|Sweden|M.g.|Kiviniemi/Mg5/05|	:	..TT.A...CC.T.C...C.A...A.G...T...G...A.A.C...C.C...A...:	:	500							
GQ339475.1|PUUV|N|Sweden|M.g.|Kiviniemi/Mg6/05|	:	..TT.A...CC.T.C...C.A...A.G...T...G...A.A.C...C.C...A...:	:	500							
GQ339476.1|PUUV|N|Sweden|M.g.|Aijajarvi/Mg7/05|	:	..TT.A...CC.T.C...C.A...A.G...T...G...A.A.C...C.C...T...A...:	:	500							

TTTTGAAGGC (PUU1P) Aitichou M at al J Virol Meth 2005

	*	420	*	440	*	460	*	480	*	500	
2014.00598|PUUV|N|France|H.s.|59|FOURMIES|	:	TCCTGAAGGCTTTATATATGTTGTCAACACGTTGGGAGACAAACTGTGAAGGAAAACAAGGgACTCGTATCCGTTTTAAAGATGACACTTCCTTTGAGGA	:	500							
GQ339477.1|PUUV|N|Sweden|M.g.|Aijajarvi/Mg9/05|	:	.TT.A....CC.T..C..C.A.....A.G.....T....G.....A.A.C....C..C.....T....A.....	:	500							
GQ339478.1|PUUV|N|Sweden|M.g.|Jockfall/Mg12/05|	:	.TT.....CC.T..C..C.A.....G.....T....G.....A.A.....C.....A.....	:	500							
GQ339482.1|PUUV|N|Sweden|M.g.|Kalvudden/Mg22/05|	:	.T.....CC.T..C..C.A.....G.....T....A.G.....A.....C.....A.....	:	500							
GQ339479.1|PUUV|N|Sweden|M.g.|Moskosel/Mg17/05|	:	.TT.....CC.T..C..C.T.....G..G....T.A.G.....A....T.C.....A.....	:	500							
GQ339481.1|PUUV|N|Sweden|M.g.|Ljustask/Mg20/05|	:	.TT.....CC.T..C..C.T.....G.....T....G.....A....T.C..C....C....C..A.C....	:	500							
GQ339480.1|PUUV|N|Sweden|M.g.|Gyttjea/Mg19/05|	:	.T.....CC.T..C..C.T.....G.....T....G.....A....T.C..C....C.....A.....	:	500							
AY526219.1|PUUV|N|Sweden|Human|Umea/hu|	:	.TT.....C..C..C.T..C.....T....G..T.....C....G.....A.....A.....	:	500							
AJ223380.1|PUUV|N|Sweden|M.g.|Tavelsjo/Cg81/94|	:	.TT...A..CC...C..C.T..C.....C.....G..T.....A....A.A....G....T....A.....	:	500							
U14137.1|PUUV|N|Bosnia-H.|M.g.|Vranica|	:	.TT...A..CC...C..C.T..C.....C.....G..T.....A..GTAT..A....G....T....A.....	:	500							
AJ223371.1|PUUV|N|Sweden|M.g.|Huggberget/Cg36/94|	:	.AT.....CC...C..C.T..T.....G..T.....A....A.A....G....T....A.....	:	500							
Z48586.1|PUUV|N|Sweden|M.g.|Vindeln/L20Cg/83|	:	.TT...A..CC...C.T..C.....G..T.....A....A.G....G....T..C.A....	:	500							
AJ223374.1|PUUV|N|Sweden|M.g.|Mellansel/Cg47/94|	:	.T.....C...C..C.T..C.....A.....T....G..T.....A....C....G....T....A.C.A..	:	500							
AJ223375.1|PUUV|N|Sweden|M.g.|Mellansel/Cg49/94|	:	.T.....C...C..C.T..C.....A.....T....G..T.....A....C....G....G....A.C.A..	:	500							
AJ238791.1|PUUV|N|Denmark|M.g.|Fyn/19|	:	.AT.A.....C.G....A.....A.G.A....G.....A.G..T....A.A....A.A.....A.....	:	500							
AJ278092.1|PUUV|N|Denmark|M.g.|Fyn47|	:	.AT.A.....C.G....A..T..CA.G.A....G....G.....G..T.....A....A.G..C.....T.A.T....A..	:	500							
AJ278093.1|PUUV|N|Denmark|M.g.|Fyn131|	:	.AT.A.....C.G....C.....A.G.A....G....G.....G..T.....A....A.G..C.....T.A.T....A..	:	500							
AJ223368.1|PUUV|N|Norway|M.g.|Eidsvoll/1124v|	:	.T.A....AC.T..C..C.A.....A....G.....T.....AA.A..T.G....G....T.A.A....	:	500							
AJ223369.1|PUUV|N|Norway|M.g.|Eidsvoll/Cg1138/87|	:	.T.A....AC.T..C..C.A.....A....G.....T.....AA.A..T.G....G....T.A.A....	:	500							
JN657228.1|PUUV|N|Latvia|M.g.|Jelgava/Mg149/2008|	:	.TT.A....A.....C..C.T.....G....A....G..T.....A.G..AA.A..C.....A.A....	:	500							
KX757839.1|PUUV|N|Lithuania|M.g.|LT15/164|2015|	:	.T.A....CC.G..C..C.T.....A.....T.....A.G..AA.G..C..G....A.A....	:	500							
KX757840.1|PUUV|N|Lithuania|M.g.|LT15/174|2015|	:	.T.A....C..G..C..C.T.....A....A....T.....A.A.G..TA.G....G....A.A....	:	500							
KX815394.1|PUUV|N|Poland|M.g.|KS13/855|2009|	:	...A....C...C..C.T.....G..A..A....T....A.A.A.A.A....G....T.A.A....	:	500							
KX757841.1|PUUV|N|Lithuania|M.g.|LT15/201|2015|	:	.T.A....CC.G..C..C.T.....A.....T.....A.G..AA.G..C..G....A.A....	:	500							
AJ314598.1|PUUV|N|Russia|M.g.|Baltic/49Cg/00|	:	...A....A.....G.....G.....G.....AA.A..AA.A....G....A.A....	:	500							
AJ314599.1|PUUV|N|Russia|M.g.|Baltic/205Cg/00|	:	...T....A.....A.G..G....A.....A..AA.G..AA.A....G....T.A.A....	:	500							
JN657229.1|PUUV|N|Latvia|M.g.|Madona/Mg99/2008|	:	...A....A..G..C.....G.....A.....AA.G..AA.G....G....T.A.T..C....	:	500							
JN657232.1|PUUV|N|Latvia|M.g.|Madona/Mg233/2008|	:	...A....A..G..C.....G.....A.....AA.G..AA.G....G....T.A.T..C....	:	500							
JN657230.1|PUUV|N|Latvia|M.g.|Jelgava/Mg136/2008|	:	...A....A..G..C.....G.....A.A....T.....AA.G..AA.A....T.A.A..C....	:	500							
JN657231.1|PUUV|N|Latvia|M.g.|Jelgava/Mg140/2008|	:	...A....A..G..C.....G.....A.A....T.....AA.G..AA.A....T.A.A..C....	:	500							
Z30707.1|PUUV|N|Russia|M.g.|Udmurtia/458Cg/88|	:	.TT.A....C...C.....A....G..C..A.A....T.G..A.A..G..A.G..C....A.G....	:	500							
Z30706.1|PUUV|N|Russia|M.g.|Udmurtia/444Cg/88|	:	.TT.A....C...C.....A....G..C..A.A....T....A.A.G..A.G..C....A.G....	:	500							
Z84204.1|PUUV|N|Russia|M.g.|Kazan|	:	.TT.A....C...C.....A....G..C..A.A....T....A.A.G..A.G..C....A.G....	:	500							
Z30708.1|PUUV|N|Russia|M.g.|Udmurtia/338Cg/92|	:	.TT.A....C...C.....A....G..CA.A.A....T.G..A.A..G..A.G..C....A.G....	:	500							
Z21497.1|PUUV|N|Russia|M.g.|Udmurtia/894Cg/91|	:	.TT.....C.....A....G..C..A.A....T....A.A.G..A.G..C....A.A....	:	500							
AB433843.2|PUUV|N|Russia|M.g.|Samara_49/CG/2005|	:	.TT.A....C.....A....C..A.A....T....A.A.G..A.G..C....A.A....	:	500							
AB433845.2|PUUV|N|Russia|M.g.|Samara_94/CG/2005|	:	.TT.A....C.....A....G..C..A.A....T....A.A.A..TA.A....G....A.A....	:	500							
L11347.1|PUUV|N|Russia|Human|P360|	:	.TT.....C.....A....G.....A....A.A.G..A.G..C....G....A.A....	:	500							
AB297665.2|PUUV|N|Russia|M.g.|DTK/Ufa-97|1997|	:	.TT.....C.....A....G.....A....A.A.G..A.G..C....G....A.A....	:	500							
M32750.1|PUUV|N|Russia|M.g.|CG1820|	:	.TT.....C.....A....G.....A....A.A.G..A.G..C....G....A.A....	:	500							
AF442613.1|PUUV|N|Russia|M.g.|CG17/Baskiria-2001|	:	.TT.....C.....A....G.....A....A.A.G..A.G..C....G....A.A....	:	500							
KX815395.1|PUUV|N|Poland|M.g.|KS14/118|2009|	:	...A.A.A..G....C.....G.....A.A....T.G..A.A..G..AA.A....G....T.C.A....	:	500							
GQ339483.1|PUUV|N|Sweden|M.g.|Bergsjobo/Mg25/05|	:	.T.A....AC.T.....G..A....A....G..A..AA.G..TA.A....G....C.A....A..	:	500							
AJ223377.1|PUUV|N|Sweden|M.g.|Solleftea/Cg6/95|	:	.T.A....AC.T.....G..A....A....G..A..AA.G..TA.A....G....C.A....A..	:	500							
GQ339484.1|PUUV|N|Sweden|M.g.|Faboviken/Mg26/05|	:	.T.A....AC.T..C.....G..G....A....T.G..A..AA.G..A.A....G....C.A....A..	:	500							
GQ339485.1|PUUV|N|Sweden|M.g.|Mangelbo/Mg1/05|	:	.TT.A....AC.C..C.....A....A....A....AA.G..TA.A....G....C.A....A..	:	500							
GQ339486.1|PUUV|N|Sweden|M.g.|Munga/Mg2/05|	:	.TT.A....AC.C..C.....A....A....A....AA.G..A.A....G....C.A....A..	:	500							
GQ339487.1|PUUV|N|Sweden|M.g.|Munga/Mg16/05|	:	.TT.A....AC.C..C.....A....A....A....AA.G..A.A....G....C.A....A..	:	500							
AJ223376.1|PUUV|N|Sweden|M.g.|Solleftea/Cg3/95|	:	.T.A....AC.T..C.....G.....A....T.....AA.G..A.A....G....T.C.A....A..	:	500							
AF367071.1|PUUV|N|Russia|M.r.|CRF366|	:	...T.A....C.....T.....A....AA.G....A.A....	:	500							
AF367064.1|PUUV|N|Russia|M.g.|CG144|	:	...T.A....C.....T.....A....AA.G....A.A....	:	500							
AF367065.1|PUUV|N|Russia|M.g.|CG168|	:	...T.A....C.....T.G....A....AA.G....A.A....	:	500							
AF367068.1|PUUV|N|Russia|M.g.|CG315|	:	...T.A....C.....T.....A....AA.G....A.A....	:	500							
AF367069.1|PUUV|N|Russia|M.r.|CRF161|	:	...T.A....C.....T.....A....AA.G....A.A....	:	500							

TTTTGAAGGC (PUU1P) Aitichou M at al J Virol Meth 2005

	*	420	*	440	*	460	*	480	*	500	
2014.00598|PUUV|N|France|H.s.|59|FOURMIES|	:	TCCTGAAGGCTTTATATATGTTGTGCAACACGCTGGGAGACAAACTGTGAAGGAAAACAAGGgACTCGTATCCGTTTTAAAGATGACACTTCCTTTGAGGA	:	500							
AF367070.1|PUUV|N|Russia|M.r.|CRF308|	:	...T.A...C.....T.....A....AA.G.....A.A.....	:	500							
AF367066.1|PUUV|N|Russia|M.g.|CG215|	:	...T.A...C.....T.....A.A....AA.G.....A.A.....	:	500							
AF367067.1|PUUV|N|Russia|M.g.|CG222|	:	...T.A...C.....T.....A.A....AA.G.....A.A.....	:	500							
Z46942.1|PUUV|N|Finland|M.g.|Puumala/1324Cg/79|	:	...T.A...C.....C.C.T....G.....T.....A....AA.G.....T.A.A....A..	:	500							
Z30702.1|PUUV|N|Finland|M.g.|Evo/12Cg/93|	:	.T.T.A...G.C.C.C.T....G.....G.....A...T.G...A....AA.G...G...T.A.A....A..	:	500							
Z30703.1|PUUV|N|Finland|M.g.|Evo/13Cg/93|	:	.T.T.A...G.C.C.C.T....G.....G.....A...T.G...A....AA.G...G...T.A.A....A..	:	500							
Z30704.1|PUUV|N|Finland|M.g.|Evo/14Cg/93|	:	.T.T.A...C.G.C.C.C.T....G.....G.....A...T.G.T.A....AA.G...G...T.A.A....A..	:	500							
Z30705.1|PUUV|N|Finland|M.g.|Evo/15Cg/93|	:	.T.T.A...G.C.C.C.T....G.....G.....A...T.G.T.A....AA.G...G...T.A.A....A..	:	500							
Z69985.1|PUUV|N|Finland|M.g.|Virrat/25Cg/95|	:	...T.A...C.....C.C.T....G.....G.C...A.G.T....A....AA.A.C.G...T...A....A..	:	500							
JN831947.1|PUUV|N|Finland|Pieksamaki/human_lung/20|	:	...T.A...C.....C.C.T....G.....T.....A....AA.G...G...T.A.A....A..	:	500							
JN831943.1|PUUV|N|Finland|Pieksamaki/Mg7/2008|	:	...T.A...C.....C.C.T....G.....T.....A....AA.G...G...T.A.A....A..	:	500							
JN831950.1|PUUV|N|Finland|Pieksamaki/human_kidney/|	:	...T.A...C.....C.C.T....G.....T.....A....AA.G...G...T.A.A....A..	:	500							
JQ319166.1|PUUV|N|Finland|Konnesvesi/Mg_O14B/2005|	:	...T...C.....C.C.T....G.....A...G.T....A....AA.G...G...T.A.A....A..	:	500							
JQ319169.1|PUUV|N|Finland|Konnesvesi/Mg_O27B/2005|	:	...T...C.....C.C.T....G.....A...G.T....A....AA.G...G...T.A.A....A..	:	500							
JQ319167.1|PUUV|N|Finland|Konnesvesi/Mg_O15B/2005|	:	...T...C.....C.C.T....G.....G.....G.T...A.A....AA.G...G...T.A.A....A..	:	500							
JQ319164.1|PUUV|N|Finland|Konnesvesi/Mg_O6B/2005|	:	...T...C.....C.C.T....G.....A...G.T....A....AA.G...G...T.A.A....A..	:	500							
JQ319165.1|PUUV|N|Finland|Konnesvesi/Mg_O9B/2005|	:	...T...C.....C.C.T....G.....A...G.T....A....AA.G...G...T.A.A....A..	:	500							
JQ319170.1|PUUV|N|Finland|Konnesvesi/Mg_O74B/2005|	:	...T...C.....C.C.T....G.....A...G.T....A....AA.G...G...T.A.A....A..	:	500							
JQ319171.1|PUUV|N|Finland|Konnesvesi/Mg_M114B/2005|	:	...T...C.....C.C.T....G.....G.....G.T...A.A....AA.G...G...T.A.A....A..	:	500							
AJ238788.1|PUUV|N|Russia|M.g.|Karhumaki|	:	...T.A...CC...C.C.C.T....A.....G...A.....T.G...G.C.AA.G.C.G...T.A.A....A..	:	500							
AJ238789.1|PUUV|N|Russia|M.g.|Kolodozero|	:	.T.T.....C.C.C.T....G.....G.....G...A.C.AA.G.C.G...T.A.A....A..	:	500							
AJ314597.1|PUUV|N|Finland|M.g.|Pallasjarvi/63Cg/98|	:	...T.A...C.....C.C.T....A...G...A...G.T.G...A.C.AA.G...G...T.A.A....A..	:	500							
NC_005224.1|PUUV|N|Finland|M.g.|Sotkamo-revu-NCBI2|	:	...T.A...C.....C.C.C....G.....G.....A...T.G...A....AA.G...G...T.A.A....A..	:	500							
AJ238790.1|PUUV|N|Russia|M.g.|Gomselga|	:	...T.A...C.....C.C.C....G.....A.....T.G...A....AA.G...G...T.A.A....A..	:	500							
AB010731.1|Hokkaido-V|N|Japan|M.r.|Tobetsu-60Cr-93|	:	.T.A...AC.T.....C.A.AC.T.....A.G.....AA.G...A...G...T.A.A....A..	:	500							
AB010730.1|Hokkaido-V|N|Japan|M.r.|Kamiiso-8Cr-95|	:	.T.A...AC.T.C.....C.A.AC.T.....A...T.....GA.G...A...G...T.A.A....A..	:	500							
JX046487.1|Muju-V|N|South-Korea|M.r.|11-5|2011|	:	.....A.AC.G.C...C.A.T...A.G.T.G...A.T.A.....AA.G.TA.A...G.....A..	:	500						
JX046484.1|Muju-V|N|South-Korea|M.r.|11-4|2011|	:	.....A.AC.G.C...C.A.T...A.G.T.G...A.T.A.....AA.G.TA.A...G.....A..	:	500						
JX028273.1|Muju-V|N|South-Korea|M.r.|11-1|2011|	:	.....A.AC...C.C.A.T...A.G.T.G...A.T.A.....AA.G.TA.A...G.....A..	:	500						
DQ138128.1|Muju-V|N|South-Korea|E.r.|00-18|	:	.....A.A.G.....C.A.G.A.G...A.C.A.A.G.T.G.A.A.A.TA.G...G.....C.A....A..	:	500						
DQ138140.1|Muju-V|N|South-Korea|E.r.|99-27|	:	.....A.A.G.....C.A.G.A.G...A.C.A.A.G.T.G.A.A.A.TA.G...G.....C.A....A..	:	500						
DQ138133.1|Muju-V|N|South-Korea|E.r.|96-1|	:	.....A.A.G.....C.A.G.A.G...A.C.A.A.G.T.G.A.A.A.TA.G...G.....C.A....A..	:	500						
DQ138142.1|Muju-V|N|South-Korea|E.r.|99-28|	:	.....A.A.G.....C.A.G.A.G...A.C.A.A.G.T.G.A.A.A.TA.G...G.....C.A....A..	:	500						

Accession	Species	Country	Year	Location	PUU S	PUU D	Score
2014.00598	PUUV	N	France	H.s. | 59 | FOURMIES	: CATCAATGGTATCAGGAGACCGAAGCACCTATATGTTTCCATGCCTACTGCTCAATCAACTATGAAGGCTGAAGAATTGACCCCGGGCGATTAGAAC	: 600	600
2014.00233	PUUV	N	France	H.s. | 59 | FOURMIES	: A T C A A	: 600	600
2014.00097	PUUV	N	France	H.s. | 02 | SAINT-MICHEL	: A	: 600	600
2014.00488	PUUV	N	France	H.s. | 08 | SIGNY-LE-PETIT	: G	: 600	600
2014.00613	PUUV	N	France	H.s. | 59 | FOURMIES	: G	: 600	600
2015.00402	PUUV	N	France	H.s. | 08 | CHARLEVILLE-MEZIE	: A T	: 600	600
2015.00422	PUUV	N	France	H.s. | 59 | ANOR	:	: 600	600
2015.00488	PUUV	N	France	H.s. | 08 | SEDAN	: A C A T	: 600	600
2015.00498	PUUV	N	France	H.s. | 08 | REMILLY-AILLICOUR	: C	: 600	600
2016.00295	PUUV	N	France	H.s. | 08 | CORNY-MACHEROMENI	: A C A T	: 600	600
2016.00333	PUUV	N	France	H.s. | 59 | FOURMIES	: T	: 600	600
2016.00345	PUUV	N	France	H.s. | 59 | FOURMIES	: T	: 600	600
2016.00357	PUUV	N	France	H.s. | 02 | HIRSON	: T	: 600	600
2016.00427	PUUV	N	France	H.s. | 59 | FOURMIES	:	: 600	600
2016.00469	PUUV	N	France	H.s. | 02 | PREMONTRE	: A G A T C	: 600	600
AJ277075.1	PUUV	N	Belgium	M.g. | Montbliart/CG14444	: T C T	: 600	600
2014.00053	PUUV	N	France	H.s. | 08 | SECHEVAL	: A C A T	: 600	600
KT247593.1	PUUV	N	France	M.g. | 08 | Ardennes/Mg75/201	: A T A T	: 600	600
KT247592.1	PUUV	N	France	M.g. | 08 | Ardennes/Mg156/20	: A T A T	: 600	600
2015.00019	PUUV	N	France	H.s. | 08 | ETEIGNIERES	: T A T	: 600	600
2016.00239	PUUV	N	France	H.s. | 08 | VIREUX-MOLHAIN	: T A A T	: 600	600
2015.00329	PUUV	N	France	H.s. | 08 | BOGNY-SUR-MEUSE	: A A A T	: 600	600
2014.00209	PUUV	N	France	H.s. | 08 | TREMBLOIS-LES-ROC	: A A T	: 600	600
2015.00456	PUUV	N	France	H.s. | 94 | ALFORTVILLE	: A A T	: 600	600
2012.00018	PUUV	N	France	H.s. | 08 | ROCROI	: A T	: 600	600
AJ277032.1	PUUV	N	Belgium	M.g. | Momignies/47Cg/96	: A A A T	: 600	600
AJ277034.1	PUUV	N	Belgium	M.g. | Couvin/59Cg/97	: A A T T	: 600	600
AJ277033.1	PUUV	N	Belgium	M.g. | Momignies/55Cg/96	: T A A A T	: 600	600
2012.00638	PUUV	N	France	H.s. | 08 | GIVET	: A T A T	: 600	600
2015.00328	PUUV	N	France	H.s. | 08 | VRIGNE-MEUSE	: A T	: 600	600
2015.00419	PUUV	N	France	H.s. | 08 | DOUZY	: T T T	: 600	600
2016.00310	PUUV	N	France	H.s. | 08 | THIN-LE-MOUTIER	: A C A T	: 600	600
AJ277030.1	PUUV	N	Belgium	M.g. | Thuin/33Cg/96	: T G T	: 600	600
AJ238779.1	PUUV	N	Germany	M.g. | NRW/Cg-Erft	: C A C T T A	: 600	600
2014.00276	PUUV	N	France	H.s. | 59 | LILLE	: T T G A T	: 600	600
U22423.1	PUUV	N	Belgium	M.g. | CG13891	: T C A C T	: 600	600
2014.00321	PUUV	N	France	H.s. | 59 | FOURMIES	: T	: 600	600
2015.00457	PUUV	N	France	H.s. | 55 | REVIGNY-SUR-ORNAI	: A G A T C	: 600	600
2013.00250	PUUV	N	France	H.s. | 62 | VENDIN-LS-BTHUNE	: A C T	: 600	600
2016.00282	PUUV	N	France	H.s. | 59 | MORBECQUE	: A C T	: 600	600
AJ277076.1	PUUV	N	Belgium	M.g. | Montbliart/CG14445	: T A C T	: 600	600
2014.00153	PUUV	N	France	H.s. | 02 | BUIRONFOSSE	: T C T	: 600	600
2014.00171	PUUV	N	France	H.s. | 59 | SAINT-SAULVE	: T A A T A C A T G	: 600	600
2016.00293	PUUV	N	France	H.s. | 60 | LA-NEUVILLE-SUR-R	: C A G T	: 600	600
2014.00499	PUUV	N	France	H.s. | 94 | CHAMPIGNY-SUR-MAR	: C	: 600	600
2012.00057	PUUV	N	France	H.s. | 59 | COUSOLRE	: T C T	: 600	600
2012.00349	PUUV	N	France	H.s. | 02 | ENGLANCOURT	: T C T	: 600	600
2014.00135	PUUV	N	France	H.s. | 02 | ATHIES-SOUS-LAON	: C	: 600	600
2014.00184	PUUV	N	France	H.s. | 59 | FOURMIES	: T C T	: 600	600
2016.00182	PUUV	N	France	H.s. | 08 | BOULZICOURT	: T C T T	: 600	600
2016.00286	PUUV	N	France	H.s. | 02 | TRUCY	: T C	: 600	600
2016.00325	PUUV	N	France	H.s. | 59 | AULNOYE-AYMERIES	: T T C T T	: 600	600
2016.00452	PUUV	N	France	H.s. | 02 | LAON	: C	: 600	600
2016.00467	PUUV	N	France	H.s. | 02 | AISNE	: C A T	: 600	600

Accession	Species	Country	Year	Strain	Sequence	Reference
2014.00598	PUUV	N|France	H.s.	|59|FOURMIES|	: CATCAATGGTATCAGGAGACCGAAGCACCTATATGTTTCCATGCCTACTGCTCAATCAACTATGAAGGCTGAAGAATTGACCCCGGGCGATTAGAACC	: 600
2015.00657	PUUV	N|France	H.s.	|02|CILLY|	: ...T.C.....C.....C.....T.A.....	: 600
2015.00526	PUUV	N|France	H.s.	|08|MONTHERME|	: .....A.....C.....C.....T.....	: 600
2015.00045	PUUV	N|France	H.s.	|59|FOURMIES|	: ...T.....A.....C.....T.....	: 600
2015.00430	PUUV	N|France	H.s.	|02|MONTCORNET|	: .....T.....C.....C.....T.....	: 600
2016.00311	PUUV	N|France	H.s.	|02|LAON|	: .....C.....C.....T.A.....	: 600
AJ277031.1	PUUV	N|Belgium	M.g.	|Montbliart/23Cg/96|	: ...T.....C.....T.A.....	: 600
2016.00326	PUUV	N|France	H.s.	|02|LAON|	: .....C.....C.....T.....	: 600
2016.00353	PUUV	N|France	H.s.	|02|CESSIERES|	: .....C.....C.....C.....	: 600
2012.00061	PUUV	N|France	H.s.	|02|LANISCOURT|	: .....C.....C.....C.....	: 600
2014.00174	PUUV	N|France	H.s.	|02|ST-ERME-OUTRE-ET-	:C.....C.....C.....	: 600
2016.00268	PUUV	N|France	H.s.	|02|PRESLES-ET-THIERN	:A.....C.....C.....	: 600
2015.00660	PUUV	N|France	H.s.	|02|VIC-SUR-AISNE|	: .....T.A.....T.G.....T.....G...	: 600
2012.00025	PUUV	N|France	H.s.	|51|SAINTE-MENEHOULD|	: ...A.....AC...A.A.....A...C.....C.....A.T.....A.G.C.G...	: 600
2015.00665	PUUV	N|France	H.s.	|51|REIMS|	: ...A.....T.AC...A.A.T.....A...C.....C.....G...A...T...A.G.C.G...	: 600
2012.00307	PUUV	N|France	H.s.	|54|COLOMBEY-LES-BELL	: ...A.....A...A...T.G.....A...C.....C.....T.T.AA.G...G.T	: 600
2012.00123	PUUV	N|France	H.s.	|55|BAR-LE-DUC|	: ...A.....C...AC...T.A.....A...C.....C.....T.T.A.G.C.G...	: 600
2012.00278	PUUV	N|France	H.s.	|51|REIMS|	: ...A.....AC...A.A.T.....A...C.....C.....A.T.T.A.G.C.G...	: 600
2015.00185	PUUV	N|France	H.s.	|68|FELLERING|	: ...A.....AC...A.A.....A...C.....G.C.....A.T...A.G.C.G...	: 600
KJ994776.1	PUUV	N|Germany	M.g.	|Mu/07/1219|2007|	: T.T.....T...G.A.A.T.G...G.....A.....GC.....T.T.....T	: 600
2012.00086	PUUV	N|France	H.s.	|58|CHEVROCHES|	: T.....TC.C.G.A.....G.....C.....GC...T.T...G...G...	: 600
KT247595.1	PUUV	N|France	M.g.	|45|Orleans/Mg29/2010	: T.....TC.C.G.A.....G.....C.....GC...T.T...G...G...	: 600
KT247594.1	PUUV	N|France	M.g.	|45|Orleans/Mg23/2010	: T.....TC.C.G.A.....G.....C.....GC...T.T...G...G...	: 600
KY365004.1	PUUV	N|France	M.g.	|45|Orleans/NCHA373/2	: T.....TC.C.G.A.....T.....G.....C.....GC...T.T...G...G...	: 600
2012.00301	PUUV	N|France	H.s.	|25|MOUTHE|	: ...A.....C.T.A...A...T.G...A.....A.A...C.C...A.A...G.A.T.T.A...G...	: 600
AM695638.1	PUUV	N|France	M.g.	|Mignovillard/CgY02/2	: ...A.....C.T.A...A...T.G...A.....A.A...C.C...A.A...G.A.T.T.A...G...	: 600
KT247597.1	PUUV	N|France	M.g.	|39|Jura/Mg214/2010|	: ...A.C.C.T.A...A...T.G...A...A.A...T.C...A.A.G.G.A.T.T.A...G...	: 600
KT247596.2	PUUV	N|France	M.g.	|39|Jura/Mg2/2010|	: ...A.C.C.T.A...A...T.G...A...A.A...T.C...A.A.G.G.A.T.T.A...G...	: 600
2012.00102	PUUV	N|France	H.s.	|39|COISERETTE|	: ...A.....C.T.A...A...T.G...A...A.A...C...A.A...G.G.A.T.T...T	: 600
2012.00536	PUUV	N|France	H.s.	|39|LA-PESSE|	: ...A.....C.T.A...A...T.G...A...A.A...C...A.A...G.A.T.T...T	: 600
2014.00622	PUUV	N|France	H.s.	|39|ARBOIS|	: ...A.....C.T.A...A...T.G...A...A.A...C.C...A.A...G.A.T.T.A...G...	: 600
2015.00567	PUUV	N|France	H.s.	|70|RIOZ|	: ...A.....C.T.A...A...T.G...A...A.A...C.C...A.A...G.A.T.T.A...G...	: 600
2014.00637	PUUV	N|France	H.s.	|25|SAULES|	: ...A.....C.T.A...A...T.G...A.T...A.A...C.C...A.A...G.A.T.T.A...G...	: 600
2012.00396	PUUV	N|France	H.s.	|39|SAINT-CLAUDE|	: ...A.....C.T.A...A...T.G...A...A.A...C.C...A.A...G.A.T.T.A...G...	: 600
2014.00120	PUUV	N|France	H.s.	|38|LE-MOUTARET|	: ...A.....C.T.A...A...T.G...A...A.A...C.C...A.A...G.A.T.T.A...G...	: 600
2015.00153	PUUV	N|France	H.s.	|73|GREZY-SUR-ISERE|	: ...A.....C.T.A...A...T.G...A...A.A...C.C...A.A...G.A.T.T.A...G...	: 600
2015.00504	PUUV	N|France	H.s.	|70|RONCHAMP|	: ...A.....C.TC...A...T.G...A...A.A.G.T.C...A...G.A.T.T.A...G...	: 600
2016.00275	PUUV	N|France	H.s.	|21|JALLANGES|	: ...A.....C.T.A...A...T.G...A...A.A...C.C...A.A...G.A.T.T.A...G...	: 600
2016.00320	PUUV	N|France	H.s.	|25|SAINT-VIT|	: ...A.....T.A...A...T.G...A...A.A...C.C...A.A...G.A.T.T.A...G...	: 600
2015.00410	PUUV	N|France	H.s.	|70|ANGIREY|	: ...A.....C.TC...A...T.G...A...A.A.G.T.C...A...G.A.T.T.A...G...	: 600
DQ016430.2	PUUV	N|Germany	M.g.	|Bavaria/CG33/04|	: ...T.....C.T...A...TTG...G.....C.....G.....A.....T.T.A.G.C.G...	: 600
DQ016432.2	PUUV	N|Germany	M.g.	|Bavaria/CG41/04|	: ...T.....T...A...TTG...G.....C.....G.....A...G...A...T.T.A.G.C.G.T	: 600
AY954723.2	PUUV	N|Germany	M.g.	|Bavaria-CG34/04|	: ...T.....T...A...TTG...G.....C.....G.....A...G...A...T.T.A.G.C.G.T	: 600
AY954722.2	PUUV	N|Germany	M.g.	|Bavaria-CG9/04|	: ...T.....T...A...TTG...G.....C.....G.....A...G...A...T.T.A.G.C.G.T	: 600
2012.00402	PUUV	N|France	H.s.	|60|GOUVIEUX|	: ...A.....C.TC.A...A...T.G...G.....A.A...G...A.A...GC.A.T.T...T	: 600
2014.00540	PUUV	N|France	H.s.	|60|CHAMBLY|	: ...A.....TC.A...A...T.G...G.....A.A...G...A.A...GC.A.T.T...T	: 600
AJ314600.1	PUUV	N|Balkan	M.g.	|Balkan-1|	: ...T...C.T.A...A...TT...A.T...A.A.C.G...A...A...GC.T.T.T.CA.G.CC.G.A	: 600
AJ314601.1	PUUV	N|Balkan	M.g.	|Balkan-2|	: ...T...C.T.A...A...TT...A.T...A.A.C.G...A...A...GC.T.T.T.CA.G.CC.G.A	: 600
FN377821.1	PUUV	N|Hungary	M.g.	|Mg9/HungaryTR17/00|	: ...T...C.T...A...TT...A...A.A.C.G.C.A...A...GC.T.T.T.CA.G.CC.G.T	: 600
FN377822.1	PUUV	N|Hungary	M.g.	|Mg23/HungaryTR17/00	: ...T...C.T.A...A...TT...A...A.A.C.G...A...A...GC.T.T.T.CA.G.CC.G.A	: 600
GQ339473.1	PUUV	N|Sweden	M.g.	|Kiviniemi/Mg3/05|	: ...T.....AC...A.A...T...G.....G.C.....A.A...C.T.A.G.T.G.CC.T.A	: 600
GQ339474.1	PUUV	N|Sweden	M.g.	|Kiviniemi/Mg5/05|	: ...T.....AC...A.A...T...A.....G.C.....A.A...C.T.A.G.T.G.CC.T.A	: 600
GQ339475.1	PUUV	N|Sweden	M.g.	|Kiviniemi/Mg6/05|	: ...T.....AC...A.A...T...A.....G.C.....A.A...C.T.A.G.T.G.CC.T.A	: 600
GQ339476.1	PUUV	N|Sweden	M.g.	|Aijajarvi/Mg7/05|	: ...T.....AC...A.A...T...G.....G.C.....A.A...C.T.A.G.T.G.CC.T.A	: 600

2014.00598|PUUV|N|France|H.s.|59|FOURMIES| : CATCAATGGTATCAGGAGACCGAAGCACCTATATGTTTCCATGCCTACTGCTCAATCAACTATGAAGGCTGAAGAATTGACCCCGGGCGATTAGAACC : 600

GQ339477.1|PUUV|N|Sweden|M.g.|Ajjarvi/Mg9/05| : ..T.....AC...A.A...T...G.....G.C.....A.A.....C.T.A.G.T.G..CC.T.A : 600

GQ339478.1|PUUV|N|Sweden|M.g.|Jockfall/Mg12/05| : T..T.....C....AC...A.A...T...A.....C.G.C.C.....A.A.....C...A.A...T.G..CC.T.A : 600

GQ339482.1|PUUV|N|Sweden|M.g.|Kalvudden/Mg22/05| : ..T.....C....AC...A.A...T...G.T.....G.C.....A.A.....C.T.A.A.C.G...C.T.A : 600

GQ339479.1|PUUV|N|Sweden|M.g.|Moskosel/Mg17/05| : ..T.....T.AC...A...T...A.....C.....C.C.....A.G.....C.T.A.A...G...C.C.T.A : 600

GQ339481.1|PUUV|N|Sweden|M.g.|Ljustask/Mg20/05| : ..T.....AC...A.T.T...A.....C.....C.C.....A.A.....C.C.A.A.A.G..CC.T.A : 600

GQ339480.1|PUUV|N|Sweden|M.g.|Gyttjea/Mg19/05| : ..T.....C....AC...A...T...A.....C.....C.C.....A.A.....C.C.A.A...G...C.C.T.A : 600

AY526219.1|PUUV|N|Sweden|Human|Umea/hu| : T.....C.T...C...A.....C...A.T.....A.C.G.T.....A.A.G...C.T.A.A.T.G...C.C.A : 600

AJ223380.1|PUUV|N|Sweden|M.g.|Tavelsjo/Cg81/94| :C....AC...A.....C...A.....A.C.....T.C.....A.....C.T.A.A.T...CC.C.A : 600

U14137.1|PUUV|N|Bosnia-H.|M.g.|Vranica| :C....AC...A.....C...A.....A.C.....T.C.....A.....C.T.A.A.T...CC.C.A : 600

AJ223371.1|PUUV|N|Sweden|M.g.|Huggberget/Cg36/94| : T.....C....AC...A.....C...A.....A.C.....T.C.....A.A.....GC.T.A.A.T.G..CC.C.A : 600

Z48586.1|PUUV|N|Sweden|M.g.|Vindeln/L20Cg/83| : T.....C....AC...A.....C...A.....A.C.G.T.C.....A.A.....C.T.A.A.T.G..CC.C.A : 600

AJ223374.1|PUUV|N|Sweden|M.g.|Mellansel/Cg47/94| : T.....C.T...C...A...T...C...A.T...C.A.C.G.T.....A.A.G...C.T.A.A.T.G...C.C.A : 600

AJ223375.1|PUUV|N|Sweden|M.g.|Mellansel/Cg49/94| : T.....C.T...C...A...T...C...A.T...C.A.C.G.T.....A.A.G...C.T.A.A.T.G...C.C.A : 600

AJ238791.1|PUUV|N|Denmark|M.g.|Fyn/19| : ..A.....C....AC...A.....G.A.....G.....C.....G.....A.G.G.....T.T...CC.C... : 600

AJ278092.1|PUUV|N|Denmark|M.g.|Fyn47| : ..A.....C....AC...A.A.T.....G.T...C...C.C.....A.G.....A.....T...CC.C.T : 600

AJ278093.1|PUUV|N|Denmark|M.g.|Fyn131| : ..A.....C....AC...A.A.T.....G.A.....A.....C.C.....G.G.....A.....T...CC.C.T : 600

AJ223368.1|PUUV|N|Norway|M.g.|Eidsvoll/1124v| : T.....C.T.A...A.A.....G.T.....A.G...C...A.A...G.A.A.A.C.G...C.G.G : 600

AJ223369.1|PUUV|N|Norway|M.g.|Eidsvoll/Cg1138/87| : T.....C.T.A...A.A.....G.T.....A.G...C...A.A...G.A.A.A.C.G...C.G.G : 600

JN657228.1|PUUV|N|Latvia|M.g.|Jelgava/Mg149/2008| : ..T.C.C.T.A...A.A...T...G.....G.....C.G...A.....A.G...C.C.A.A.T...C.T.A : 600

KX757839.1|PUUV|N|Lithuania|M.g.|LT15/164|2015| : T..T.....C....A...A.A.T.G.....C.....C.....A.A.....C.A.A.A.T...C.T.A : 600

KX757840.1|PUUV|N|Lithuania|M.g.|LT15/174|2015| : T..T.....C....A...A.A.T.G.....C.....C.....A.A.....C.A.A.A.T...C.T.A : 600

KX815394.1|PUUV|N|Poland|M.g.|KS13/855|2009| : ..T.....C.....A.....TT.G.....C.....C.....C.....A.A.....C.T.A.A.T...C.T.A : 600

KX757841.1|PUUV|N|Lithuania|M.g.|LT15/201|2015| : T..T.....C....A...A.A.T.G.....C.....C.....A.A.....C.A.A.A.T...C.T.A : 600

AJ314598.1|PUUV|N|Russia|M.g.|Baltic/49Cg/00| : T.....C.T...G.A.A.T.T...A.....A.....C.....T.A.....A.G...C.T.A.T...C.G.A : 600

AJ314599.1|PUUV|N|Russia|M.g.|Baltic/205Cg/00| : ..T.....A.A...A.A.T.G...C.....A.....C.A.....A.G...C.C.A.T...G..CC.T.A : 600

JN657229.1|PUUV|N|Latvia|M.g.|Madona/Mg99/2008| : ..T.....T...C.A.T.G...T...A.....C.A.....A.....C.C.A.T...G..CC.T.A : 600

JN657232.1|PUUV|N|Latvia|M.g.|Madona/Mg233/2008| : ..T.....T...C.A.T.G...T...A.....C.A.....A.....C.C.A.T...G..CC.T.A : 600

JN657230.1|PUUV|N|Latvia|M.g.|Jelgava/Mg136/2008| : T..T.C.C.T...A.A.G...C.T...C.A.C...C.A.....C.C.A.T...G..CC.T.A : 600

JN657231.1|PUUV|N|Latvia|M.g.|Jelgava/Mg140/2008| : T..T.C.C.T...A.A.G...C.T...C.A.C...C.A.....C.C.A.T...G..CC.T.A : 600

Z30707.1|PUUV|N|Russia|M.g.|Udmurtia/458Cg/88| : T..T...C.T...A.A.T...A.....C.G.C.C...A.....C.T.A...A.G..CC.T.A : 600

Z30706.1|PUUV|N|Russia|M.g.|Udmurtia/444Cg/88| : T..T...C.T...A.A.T...A.....C.G.C.C...A.....C.T.A...A.G..CC.T.A : 600

Z84204.1|PUUV|N|Russia|M.g.|Kazan| : T..T...C.T...A.A.T...A.....C.G.C.C...A.....C.T.A...A.G..CC.T.A : 600

Z30708.1|PUUV|N|Russia|M.g.|Udmurtia/338Cg/92| : T..T...C.T...A.A.T...A.....C.G.C.C...A.....C.T.A...A.G..CC.T.A : 600

Z21497.1|PUUV|N|Russia|M.g.|Udmurtia/894Cg/91| : T..T...C.T...A.A.T...A.....C.G.C.C...A.....C.T.A...A.G..CC.T.A : 600

AB433843.2|PUUV|N|Russia|M.g.|Samara_49/Cg/2005| : T..T...C...G.A.A.T...A.....A.....G.C.C...A.....C.C.A...AA.G...C.T.A : 600

AB433845.2|PUUV|N|Russia|M.g.|Samara_94/CG/2005| : T..T...C...A.A.A.T...A.....A.....G.C.C...A.....C.T.A...A.G..CC.T.A : 600

L11347.1|PUUV|N|Russia|Human|P360| : T.....C.....A.A.....A.....C.G.C.C...A.....C.T.A.T.A.G..CC.T.A : 600

AB297665.2|PUUV|N|Russia|M.g.|DTK/Ufa-97|1997| : T.....C.....A.A.....A.....C.G.C.C...A.....C.T.A.T.A.G..CC.T.A : 600

M32750.1|PUUV|N|Russia|M.g.|CG1820| : T.....C.....A.A.....A.....C.G.C.C...A.....C.T.A.T.A.G..CC.T.A : 600

AF442613.1|PUUV|N|Russia|M.g.|CG17/Baskiria-2001| : T.....C.....A.A.....A.....C.G.C.C...A.....C.T.A.T.A.G..CC.T.A : 600

KX815395.1|PUUV|N|Poland|M.g.|KS14/118|2009| : T..T.....T...G.T...T...C.....C.....GC...A.T.AA.G...C...A : 600

GQ339483.1|PUUV|N|Sweden|M.g.|Bergsjobo/Mg25/05| : T.....C...A...T.A.TT...G.....A.A.G.C.A...A...G.A.A.A.C.G...C...A : 600

AJ223377.1|PUUV|N|Sweden|M.g.|Solleftea/Cg6/95| : T.....C...A...T.A.TT...G.....A.A.G.C.A...A...G.A.A.A.C.G...C...A : 600

GQ339484.1|PUUV|N|Sweden|M.g.|Faboviken/Mg26/05| : T.....C.T...T.A.T...G.T...A.A...C.A...A...G...A.A.C...C...A : 600

GQ339485.1|PUUV|N|Sweden|M.g.|Mangelbo/Mg1/05| : ..T.....C....A...T...G.T...C.A.A.G...A...A...G.A.A.A.T...C.G.A : 600

GQ339486.1|PUUV|N|Sweden|M.g.|Munga/Mg2/05| : ..T.....C....A...T...G.T...C.A.A.G...A...A...G.A.A.A.T...CC.G.A : 600

GQ339487.1|PUUV|N|Sweden|M.g.|Munga/Mg16/05| : ..T.....C....A...T...G.T...C.A.A.G...A...A...G.A.A.A.T...CC.G.A : 600

AJ223376.1|PUUV|N|Sweden|M.g.|Solleftea/Cg3/95| : T.....C.T...T.A.TT...A.T...A.A.G.C.A...A...G...A.A.C...C...A : 600

AF367071.1|PUUV|N|Russia|M.r.|CRF366| : ..A...C.A...A.A.T...A.....C.....A.A.A.G...C.C.A.T.TA...C.C.A : 600

AF367064.1|PUUV|N|Russia|M.g.|CG144| : ..A...C.A...A.A.T...A.....C.....A.A.A.G...C.C.A.T.TA...C.C.A : 600

AF367065.1|PUUV|N|Russia|M.g.|CG168| : ..A...C.A...A.A.T...C.A...C.....A.A.A.G...C.C.A.T.TA...C.C.A : 600

AF367068.1|PUUV|N|Russia|M.g.|CG315| : ..A...C.A...A.A.T...C.A...C.....A.A.A.G...C.C.A.T.TA...C.C.A : 600

AF367069.1|PUUV|N|Russia|M.r.|CRF161| : ..A...C.A...A.A.T...C.A...C.....A.A.A.G...C.C.A.T.TA...C.C.A : 600

* 520

* 540

* 560

* 580

* 600

2014.00598|PUUV|N|France|H.s.|59|FOURMIES| : CATCAATGGTATCAGGAGACCGAAGCACCTATATGTTTCCATGCCTACTGCTCAATCAACTATGAAGGCTGAAGAATTGACCCCGGGCGATTAGAAC : 600

AF367070.1|PUUV|N|Russia|M.r.|CRF308| : ...A...C..A.....A..A..T.....C..A.....C.....A.....A..A..G...C..C..A..T..TA....C..C..A : 600

AF367066.1|PUUV|N|Russia|M.g.|CG215| : ...A...C..A.....A..A..T.....C..A.....C.....A.....A..A..G...C..C..A..T..TA....C..C..A : 600

AF367067.1|PUUV|N|Russia|M.g.|CG222| : ...A...C..A.....A..A..T.....C..A.....C.....A.....A..A..G...C..C..A..T..TA....C..C..A : 600

Z46942.1|PUUV|N|Finland|M.g.|Puumala/1324Cg/79| :C..A.....G..A.....TT.....T.....C..A..C..G.....C.....A.....C..C..A..A..TA.G...C..C..A : 600

Z30702.1|PUUV|N|Finland|M.g.|Evo/12Cg/93| :C..A..A.....A.....TT.....C.....A.....C.....A.....C..C..A..A..TA....CC..T..A : 600

Z30703.1|PUUV|N|Finland|M.g.|Evo/13Cg/93| :C..A..A.....A.....TT.....C.....A.....C.....A.....C..C..A..A..TA....CC..T..A : 600

Z30704.1|PUUV|N|Finland|M.g.|Evo/14Cg/93| :C..A..A.....A.....TT.....C.....A.....C.....A.....C..C..A..A..TA....CC..T..A : 600

Z30705.1|PUUV|N|Finland|M.g.|Evo/15Cg/93| :C..A..A.....A.....TT.....C.....A.....C.....A.....C..C..A..A..TA....CC..T..A : 600

Z69985.1|PUUV|N|Finland|M.g.|Virrat/25Cg/95| : ...T..C..C..A.....A.....TT.....C..G.....C.....C..T..A..A..CA....C..C..A : 600

JN831947.1|PUUV|N|Finland|Pieksamaki/human_lung/20| : ...T.....C..A.....G..A.....TT...C...T...C...C...G...C...A.....C..C..A..A..TA.G...C..C..A : 600

JN831943.1|PUUV|N|Finland|Pieksamaki/Mg7/2008| : ...T.....C..A.....G..A.....TT...C...T...C...C...G...C...A.....C..C..A..A..TA.G...C..C..A : 600

JN831950.1|PUUV|N|Finland|Pieksamaki/human_kidney/| : ...T.....C..A.....G..A.....TT...C...T...C...C...G...C...A.....C..C..A..A..TA.G...C..C..A : 600

JQ319166.1|PUUV|N|Finland|Konnesvesi/Mg_O14B/2005| :C..C..A.....G..A.....TT.....C..G...C.....A.....C..C..A..G..TA.G...C..C..A : 600

JQ319169.1|PUUV|N|Finland|Konnesvesi/Mg_O27B/2005| :C..C..A.....G..A.....TT.....C..G...C.....A.....C..C..A..G..TA.G...C..C..A : 600

JQ319167.1|PUUV|N|Finland|Konnesvesi/Mg_O15B/2005| :C..C..A.....G..A.....TT.....C..G...C.....A.....C..C..A..A..TA.G...C..C..A : 600

JQ319164.1|PUUV|N|Finland|Konnesvesi/Mg_O6B/2005| :C..C..A.....G..A.....TT.....C..G...C.....A.....C..C..A..G..TA.G...C..CG..A : 600

JQ319165.1|PUUV|N|Finland|Konnesvesi/Mg_O9B/2005| :C..C..A.....G..A.....TT.....C..G...C.....A.....C..C..A..G..TA.G...C..CG..A : 600

JQ319170.1|PUUV|N|Finland|Konnesvesi/Mg_O74B/2005| :C..C..A.....G..A.....TT.....C..G...C.....A.....C..C..A..G..TA.G...C..C..A : 600

JQ319171.1|PUUV|N|Finland|Konnesvesi/Mg_M114B/2005| :C..C..A.....G..A.....TT.....C..G...C.....A.....C..C..A..A..TA.G...C..C..A : 600

AJ238788.1|PUUV|N|Russia|M.g.|Karhumaki| :C..A.....A.....T.....T.....C.....G.....C.....A.....C..C..A..A..TA....C..T..A : 600

AJ238789.1|PUUV|N|Russia|M.g.|Kolodozero| :C..A.....A.....TT.....T.....C.....G.....C.....A.....C..C..A..A..CA....C..T..A : 600

AJ314597.1|PUUV|N|Finland|M.g.|Pallasjarvi/63Cg/98| :C..A.....A.....TT.....C.....G.....C.....A.....C..C..A..A..TA....C..T..A : 600

NC_005224.1|PUUV|N|Finland|M.g.|Sotkamo-revu-NCBI2| :C..A.....A.....TT.....T.....C.....G.....A.....A.....C..C..A..T..CA....C..C..A : 600

AJ238790.1|PUUV|N|Russia|M.g.|Gomselga| : G.....C..A.....A.....T.....C.....G.....C.....A.....G.....C..C..A..A..CA....C..T..A : 600

AB010731.1|Hokkaido-V|N|Japan|M.r.|Tobetsu-60Cr-93| :G..T.....G..A..A..T..G.....G..T.....C..A.....A.....G..A..C..A..T...A..G..CC..C... : 600

AB010730.1|Hokkaido-V|N|Japan|M.r.|Kamiiso-8Cr-95| : ...T..C..G..T..A..G..A..A..T..G.....G.....C..A.....A.....G..GA..T..A..T...A..G...C..C... : 600

JX046487.1|Muju-V|N|South-Korea|M.r.|11-5|2011| : ...T...A..TC..C..G..C..A..T.....G..A...A.....G..C.....A..G..G..A..A..G..TA.G...C..G..A : 600

JX046484.1|Muju-V|N|South-Korea|M.r.|11-4|2011| : ...T...A..TC..C..G..C..A..T.....G..A...A.....C.....A..G..G..A..A..G..TA.G...C..G..A : 600

JX028273.1|Muju-V|N|South-Korea|M.r.|11-1|2011| : ...T...G..TC..C..G..C..A..T.....C..G..A...A.....C.....A.....G..A..A..G..CA.G...C..G..A : 600

DQ138128.1|Muju-V|N|South-Korea|E.r.|00-18| :TC..A.....T..A.....A...A.....C.....G...C...A..A..TA.G..CC..G..A : 600

DQ138140.1|Muju-V|N|South-Korea|E.r.|99-27| :TC..A.....T..A.....A...A.....C.....G...C...A..A..TA.G..CC..G..A : 600

DQ138133.1|Muju-V|N|South-Korea|E.r.|96-1| :TC.....T..A.....A...A.....C.....G...C..A..A..TA.G..CC..G..A : 600

DQ138142.1|Muju-V|N|South-Korea|E.r.|99-28| :TC..A..C..T..A.....A...A.....C.....G...C...A..A..TA.G..CC..T..A : 600

	*	620	*	640	*	660	*	680	*	700	
2014.00598|PUUV|N|France|H.s.|59|FOURMIES|	:	ATAGTATGCGGTCTATTTC	CAACTCAAATTCAAGTACGCAACATAATGAGCCCTGTCATGGGAGTCATTGGGTTTCTTTCTTTGTCAAGGATTGGGCAG	:	700						
2014.00233|PUUV|N|France|H.s.|59|FOURMIES|	:	.....T.....T.....T.....C.....	:	700						
2014.00097|PUUV|N|France|H.s.|02|SAINT-MICHEL|	:	.....G.....T.....C.....	:	700						
2014.00488|PUUV|N|France|H.s.|08|SIGNY-LE-PETIT|	:	.....T.....T.....C.....	:	700						
2014.00613|PUUV|N|France|H.s.|59|FOURMIES|	:	.....T.....T.....C.....	:	700						
2015.00402|PUUV|N|France|H.s.|08|CHARLEVILLE-MEZIE|	:	.....T.....G.....A.....T.....T.....T.....C.....	:	700						
2015.00422|PUUV|N|France|H.s.|59|ANOR|	:	.....	:	700						
2015.00488|PUUV|N|France|H.s.|08|SEDAN|	:	.....T.....G.....A.....T.....T.....T.....C.....	:	700						
2015.00498|PUUV|N|France|H.s.|08|REMILLY-AILLICOUR|	:	.....T.....	:	700						
2016.00295|PUUV|N|France|H.s.|08|CORNAY-MACHEROMENI|	:	.....T.....C.....T.....C.....	:	700						
2016.00333|PUUV|N|France|H.s.|59|FOURMIES|	:	.....T.....	:	700						
2016.00345|PUUV|N|France|H.s.|59|FOURMIES|	:	.....T.....	:	700						
2016.00357|PUUV|N|France|H.s.|02|HIRSON|	:	.....T.....	:	700						
2016.00427|PUUV|N|France|H.s.|59|FOURMIES|	:	.....	:	700						
2016.00469|PUUV|N|France|H.s.|02|PREMONTRE|	:	.....T.....T.....G.....G.....C.....A.....T.....T.....C.....	:	700						
AJ277075.1|PUUV|N|Belgium|M.g.|Montbliart/CG14444|	:	.....G.....A.....T.....C.....T.....C.....	:	700						
2014.00053|PUUV|N|France|H.s.|08|SECHEVAL|	:	.....T.....G.....A.....T.....T.....T.....C.....	:	700						
KT247593.1|PUUV|N|France|M.g.|08|Ardennes/Mg75/201|	:	.....T.....A.....T.....T.....C.....	:	700						
KT247592.1|PUUV|N|France|M.g.|08|Ardennes/Mg156/20|	:	.....T.....A.....T.....T.....C.....	:	700						
2015.00019|PUUV|N|France|H.s.|08|ETEIGNIERES|	:	.....G.....T.....A.....T.....T.....C.....	:	700						
2016.00239|PUUV|N|France|H.s.|08|VIREUX-MOLHAIN|	:	.....T.....T.....A.....T.....T.....C.....	:	700						
2015.00329|PUUV|N|France|H.s.|08|BOGNY-SUR-MEUSE|	:	.....T.....A.....T.....T.....C.....	:	700						
2014.00209|PUUV|N|France|H.s.|08|TREMBOIS-LES-ROC|	:	.....T.....A.....T.....C.....T.....C.....T.....	:	700						
2015.00456|PUUV|N|France|H.s.|94|ALFORTVILLE|	:	.....T.....G.....T.....T.....A.....C.....	:	700						
2012.00018|PUUV|N|France|H.s.|08|ROCROI|	:	.....T.....A.....T.....T.....C.....T.....C.....	:	700						
AJ277032.1|PUUV|N|Belgium|M.g.|Momignies/47Cg/96|	:	.....T.....G.....T.....T.....C.....	:	700						
AJ277034.1|PUUV|N|Belgium|M.g.|Couvin/59Cg/97|	:	.....T.....A.....T.....T.....C.....	:	700						
AJ277033.1|PUUV|N|Belgium|M.g.|Momignies/55Cg/96|	:	.....T.....T.....G.....T.....T.....C.....	:	700						
2012.00638|PUUV|N|France|H.s.|08|GIVET|	:	.....T.....C.....G.....T.....T.....T.....C.....T.....	:	700						
2015.00328|PUUV|N|France|H.s.|08|VRIGNE-MEUSE|	:	.....T.....T.....A.....T.....T.....T.....C.....	:	700						
2015.00419|PUUV|N|France|H.s.|08|DOUZY|	:	.....C.....C.....A.....T.....T.....C.....	:	700						
2016.00310|PUUV|N|France|H.s.|08|THIN-LE-MOUTIER|	:	.....C.....T.....T.....C.....	:	700						
AJ277030.1|PUUV|N|Belgium|M.g.|Thuin/33Cg/96|	:	.....T.....A.....T.....T.....C.....	:	700						
AJ238779.1|PUUV|N|Germany|M.g.|NRW/Cg-Erft|	:	.....G.....A.....T.....T.....C.....T.....	:	700						
2014.00276|PUUV|N|France|H.s.|59|LILLE|	:	.....G.....A.....T.....T.....C.....	:	700						
U22423.1|PUUV|N|Belgium|M.g.|CG13891|	:	.....T.....C.....G.....T.....T.....A.....A.....C.....C.....T.....C.....T.....A.....C.....	:	700						
2014.00321|PUUV|N|France|H.s.|59|FOURMIES|	:	.....T.....T.....G.....G.....A.....T.....T.....C.....	:	700						
2015.00457|PUUV|N|France|H.s.|55|REVIGNY-SUR-ORNAI|	:	.....T.....T.....G.....G.....A.....T.....T.....C.....	:	700						
2013.00250|PUUV|N|France|H.s.|62|VENDIN-LS-BTHUNE|	:	.....T.....G.....T.....G.....C.....C.....T.....T.....C.....	:	700						
2016.00282|PUUV|N|France|H.s.|59|MORBECQUE|	:	.....T.....T.....G.....T.....G.....C.....C.....T.....T.....C.....	:	700						
AJ277076.1|PUUV|N|Belgium|M.g.|Montbliart/CG14445|	:	.....G.....A.....T.....C.....T.....C.....	:	700						
2014.00153|PUUV|N|France|H.s.|02|BUIRONFOSSE|	:	.....G.....T.....A.....T.....C.....T.....C.....	:	700						
2014.00171|PUUV|N|France|H.s.|59|SAINT-SAULVE|	:	.....G.....T.....C.....G.....T.....G.....T.....C.....C.....T.....	:	700						
2016.00293|PUUV|N|France|H.s.|60|LA-NEUVILLE-SUR-R|	:	.....G.....A.....C.....G.....T.....T.....T.....C.....	:	700						
2014.00499|PUUV|N|France|H.s.|94|CHAMPIGNY-SUR-MAR|	:	.....T.....G.....A.....T.....A.....T.....C.....T.....C.....	:	700						
2012.00057|PUUV|N|France|H.s.|59|COUSOLRE|	:	.....G.....A.....T.....C.....T.....C.....	:	700						
2012.00349|PUUV|N|France|H.s.|02|ENGLANCOURT|	:	.....G.....C.....T.....A.....T.....C.....T.....C.....	:	700						
2014.00135|PUUV|N|France|H.s.|02|ATHIES-SOUS-LAON|	:	.....T.....G.....A.....T.....A.....T.....C.....T.....C.....	:	700						
2014.00184|PUUV|N|France|H.s.|59|FOURMIES|	:	.....G.....A.....T.....C.....T.....C.....	:	700						
2016.00182|PUUV|N|France|H.s.|08|BOULZICOURT|	:	.....G.....A.....T.....C.....T.....C.....	:	700						
2016.00286|PUUV|N|France|H.s.|02|TRUCY|	:	.....T.....G.....A.....T.....A.....T.....C.....T.....C.....	:	700						
2016.00325|PUUV|N|France|H.s.|59|AULNOYE-AYMERIES|	:	.....G.....A.....T.....C.....T.....C.....	:	700						
2016.00452 PUUV N France H.s. 02 LAON	:G.....A.....T.....A.....T.....C.....T.....C.....	:	700							
2016.00467 PUUV N France H.s. 02 AISNE	:G.....C.....T.....A.....T.....C.....T.....C.....	:	700							


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*          620          *          640          *          660          *          680          *          700
2014.00598|PUUV|N|France|H.s.|59|FOURMIES| : ATAGTATGCGGTCTATTTCCAACTCAAATTCAAGTACGCAACATAATGAGCCCTGTCATGGGAGTCATTGGGTTTCTTCTTTGTCAAGGATTGGGCAG : 700
GQ339477.1|PUUV|N|Sweden|M.g.|Aijajarvi/Mg9/05| : . . . . T . . . GT . . . . . A . . G . . . C . . . . G . . . A . . T . . . . T . . A . . A . . . . G . . G . . . C . . . . . T . . A . . G . . . . : 700
GQ339478.1|PUUV|N|Sweden|M.g.|Jockfall/Mg12/05| : . . . . T . . . GT . G . . . . G . . . A . . G . . C . . G . . G . . A . . T . . . . T . . A . . A . . . . G . . . . C . . . . . T . . A . . G . . . . : 700
GQ339482.1|PUUV|N|Sweden|M.g.|Kalvudden/Mg22/05| : . . . . T . . . GT . G . . . . A . . G . . C . . G . . A . . T . . . . T . . A . . A . . . . G . . G . . . C . . . . . T . . A . . G . . . . : 700
GQ339479.1|PUUV|N|Sweden|M.g.|Moskosel/Mg17/05| : . . . . T . . . . GT . . . . . T . . A . . G . . C . . . . G . . A . . T . . . . T . . A . . A . . . . G . . . . A . . G . . . . T . . A . . G . . . . : 700
GQ339481.1|PUUV|N|Sweden|M.g.|Ljustrask/Mg20/05| : . . . . T . . . . GT . G . . . . T . . A . . G . . C . . . . A . . . . . T . . A . . A . . . . G . . . . A . . G . . . . T . . A . . G . . . . : 700
GQ339480.1|PUUV|N|Sweden|M.g.|Gyttjea/Mg19/05| : . . . . T . . . . GT . G . . . . T . . C . . G . . C . . . . G . . A . . T . . . . T . . A . . A . . . . G . . . . A . . G . . . . T . . A . . G . . . . : 700
AY526219.1|PUUV|N|Sweden|Human|Umea/hu| : . . . . T . . . CT . . . . T . . A . . . . T . . A . . T . . . . T . . A . . A . . . . G . . G . . . C . . . . C . . . . T . . . . C . . . . C . . . : 700
AJ223380.1|PUUV|N|Sweden|M.g.|Tavelsjo/Cg81/94| : . . . . C . . . CT . . . . C . . T . . A . . . . T . . A . . T . . . . T . . A . . A . . . . A . . . . C . . C . . . . T . . . . C . . . . : 700
U14137.1|PUUV|N|Bosnia-H.|M.g.|Vranica| : . . . . C . . . CT . . . . C . . T . . A . . . . T . . A . . T . . . . T . . A . . A . . . . A . . . . C . . C . . . . T . . . . C . . . . : 700
AJ223371.1|PUUV|N|Sweden|M.g.|Huggberget/Cg36/94| : . . . . C . . . CT . . . . C . . T . . A . . . . C . . G . . T . . . . T . . A . . A . . . . G . . . . C . . C . . . . T . . . . C . . . . : 700
Z48586.1|PUUV|N|Sweden|M.g.|Vindeln/L20Cg/83| : . . . . C . . . CT . . . . C . . T . . A . . . . C . . A . . . . T . . A . . A . . . . G . . . . C . . . . T . . . . C . . . . : 700
AJ223374.1|PUUV|N|Sweden|M.g.|Mellansel/Cg47/94| : . . . . . T . . CT . . . . C . . T . . A . . . . T . . A . . T . . . . T . . A . . A . . . . G . . G . . . C . . . . C . . . . T . . . . C . . . . : 700
AJ223375.1|PUUV|N|Sweden|M.g.|Mellansel/Cg49/94| : . . . . . T . . CT . . . . C . . T . . A . . . . T . . A . . T . . . . T . . A . . A . . . . G . . G . . . C . . . . C . . . . T . . . . C . . . . : 700
AJ238791.1|PUUV|N|Denmark|M.g.|Fyn/19| : . . . . . T . . . . C . . . . A . . . . . C . . . . T . . . . T . . . . T . . . . G . . G . . . C . . C . . C . . . . T . . . . T . . . . : 700
AJ278092.1|PUUV|N|Denmark|M.g.|Fyn47| : . . . . . T . . . . C . . . . A . . . . . C . . . . A . . . . T . . . . T . . . . A . . . . G . . T . . A . . C . . C . . T . . C . . T . . . . TT : 700
AJ278093.1|PUUV|N|Denmark|M.g.|Fyn131| : . . . . . T . . . . C . . . . A . . . . . C . . . . T . . . . T . . . . G . . . . T . . A . . C . . C . . C . . T . . C . . T . . . . T . . : 700
AJ223368.1|PUUV|N|Norway|M.g.|Eidsvoll/1124v| : . . . . . T . . . . GT . G . . . . C . . . . G . . C . . G . . . . T . . . . T . . . . G . . T . . . . C . . C . . . . T . . . . C . . . . : 700
AJ223369.1|PUUV|N|Norway|M.g.|Eidsvoll/Cg1138/87| : . . . . . T . . . . GT . G . . . . C . . . . G . . C . . G . . . . T . . . . T . . . . G . . T . . . . C . . C . . . . T . . . . C . . . . : 700
JN657228.1|PUUV|N|Latvia|M.g.|Jelgava/Mg149/2008| : . . T . . T . . CT . . . . . G . . A . . . . G . . . . . C . . . . T . . A . . A . . . . T . . . . C . . C . . . . T . . . . A . . . . C . . . . : 700
KX757839.1|PUUV|N|Lithuania|M.g.|LT15/164|2015| : . . T . . T . . T . . TG . G . . . . C . . . . G . . A . . G . . G . . T . . . . C . . . . T . . A . . A . . . . T . . . . A . . C . . C . . T . . . . G . . A . . C . . : 700
KX757840.1|PUUV|N|Lithuania|M.g.|LT15/174|2015| : . . T . . T . . T . . TG . G . . . . C . . . . G . . A . . G . . G . . T . . . . C . . . . T . . A . . A . . . . T . . . . A . . C . . T . . . . G . . A . . C . . G . . : 700
KX815394.1|PUUV|N|Poland|M.g.|KS13/855|2009| : . . T . . T . . T . . C . . G . . C . . . . G . . A . . G . . G . . . . T . . C . . . . T . . A . . A . . . . T . . T . . . . A . . C . . T . . C . . G . . . . : 700
KX757841.1|PUUV|N|Lithuania|M.g.|LT15/201|2015| : . . T . . T . . T . . TG . G . . . . C . . . . G . . A . . G . . G . . T . . . . C . . . . T . . A . . A . . . . T . . . . A . . C . . C . . T . . . . G . . A . . C . . : 700
AJ314598.1|PUUV|N|Russia|M.g.|Baltic/49Cg/00| : . . . . . T . . . . . C . . . . CT . . . . . A . . . . . C . . . . . T . . . . . C . . . . . T . . . . . A . . . . . G . . . . . A . . . . . T . . . . . C . . . . . T . . . . . A . . C . . C . . : 700
AJ314599.1|PUUV|N|Russia|M.g.|Baltic/205Cg/00| : . . . . . T . . . . . G . . C . . T . . . . . A . . . . . T . . T . . C . . . . . T . . A . . G . . . . . G . . A . . . . . T . . . . . C . . T . . . . . A . . C . . C . . : 700
JN657229.1|PUUV|N|Latvia|M.g.|Madona/Mg99/2008| : . . . . . T . . . . . C . . . . CT . . C . . A . . . . . C . . . . . C . . . . . T . . A . . A . . . . . G . . . . . C . . . . . G . . . . . T . . A . . C . . C . . : 700
JN657232.1|PUUV|N|Latvia|M.g.|Madona/Mg233/2008| : . . . . . T . . . . . C . . . . CT . C . . A . . . . . C . . . . . C . . . . . T . . A . . A . . . . . G . . . . . C . . . . . G . . . . . T . . A . . C . . C . . : 700
JN657230.1|PUUV|N|Latvia|M.g.|Jelgava/Mg136/2008| : G . . . . . T . . C . . . . C . . AT . C . . A . . . . . C . . . . . T . . G . . G . . . . . C . . . . . G . . . . . A . . C . . C . . : 700
JN657231.1|PUUV|N|Latvia|M.g.|Jelgava/Mg140/2008| : G . . . . . T . . C . . . . C . . AT . C . . A . . . . . C . . . . . T . . G . . G . . . . . C . . . . . G . . . . . A . . C . . C . . : 700
Z30707.1|PUUV|N|Russia|M.g.|Udmurtia/458Cg/88| : . . . . . T . . CT . . . . T . . A . . G . . A . . . . G . . T . . . . C . . . . T . . A . . A . . . . A . . . . T . . . . A . . C . . C . . : 700
Z30706.1|PUUV|N|Russia|M.g.|Udmurtia/444Cg/88| : . . . . . T . . CT . . . . T . . A . . G . . A . . . . G . . T . . . . C . . . . T . . A . . A . . . . G . . . . T . . . . A . . C . . C . . : 700
Z84204.1|PUUV|N|Russia|M.g.|Kazan| : . . . . . T . . CT . . . . T . . A . . G . . A . . . . G . . T . . . . C . . . . T . . A . . A . . . . G . . . . T . . . . A . . C . . C . . : 700
Z30708.1|PUUV|N|Russia|M.g.|Udmurtia/338Cg/92| : . . . . . T . . CT . . . . T . . A . . G . . A . . . . G . . T . . . . C . . . . T . . A . . A . . . . G . . . . T . . . . A . . C . . C . . : 700
Z21497.1|PUUV|N|Russia|M.g.|Udmurtia/894Cg/91| : . . . . . T . . CT . . . . T . . A . . G . . A . . . . G . . T . . . . C . . . . T . . A . . A . . . . G . . . . T . . . . A . . C . . C . . : 700
AB433843.2|PUUV|N|Russia|M.g.|Samara_49/Cg/2005| : . . . . . T . . CT . . . . C . . T . . A . . G . . A . . . . G . . T . . . . C . . . . T . . A . . G . . . . G . . . . T . . . . T . . A . . C . . C . . : 700
AB433845.2|PUUV|N|Russia|M.g.|Samara_94/Cg/2005| : . . . . . T . . CT . G . C . T . A . G . A . . . . G . T . . . . C . . . . T . . A . . G . . . . G . . . . T . . . . T . . A . . C . . C . G . . : 700
L11347.1|PUUV|N|Russia|Human|P360| : . . . . . T . . CT . . . . C . . T . . A . . G . . A . . . . T . . T . . C . . . . T . . A . . A . . . . G . . . . T . . . . C . . T . . A . . C . . C . . : 700
AB297665.2|PUUV|N|Russia|M.g.|DTK/Ufa-97|1997| : . . . . . T . . CT . . . . C . . T . . A . . G . . A . . . . T . . T . . C . . . . T . . A . . A . . . . G . . . . T . . . . C . . T . . A . . C . . C . . : 700
M32750.1|PUUV|N|Russia|M.g.|CG1820| : . . . . . T . . CT . . . . C . . T . . A . . G . . A . . . . T . . T . . C . . . . T . . A . . A . . . . G . . . . T . . . . C . . T . . A . . C . . C . . : 700
AF442613.1|PUUV|N|Russia|M.g.|CG17/Baskiria-2001| : . . . . . T . . CT . . . . C . . T . . A . . G . . A . . . . T . . T . . C . . . . T . . A . . A . . . . G . . . . T . . . . T . . A . . C . . C . . : 700
KX815395.1|PUUV|N|Poland|M.g.|KS14/118|2009| : . . . . G . . T . . CT . . . . C . . T . . . . A . . G . . G . . T . . T . . C . . . . . G . . A . . . . G . . A . . . . C . . . . A . . . . T . . . . A . . C . . C . . : 700
GQ339483.1|PUUV|N|Sweden|M.g.|Bergsjobo/Mg25/05| : . . . . . T . . . . . T . . . . . G . . . . . T . . . . . T . . . . . T . . A . . . . G . . T . . . . C . . . . . T . . . . . : 700
AJ223377.1|PUUV|N|Sweden|M.g.|Solleftea/Cg6/95| : . . . . . T . . . . . T . . . . . G . . . . . T . . . . . T . . . . . T . . A . . . . G . . T . . . . C . . . . . T . . . . . : 700
GQ339484.1|PUUV|N|Sweden|M.g.|Faboviken/Mg26/05| : . . . . . T . . T . . . . T . . . . . G . . T . . T . . . . T . . A . . T . . . . G . . T . . . . C . . . . . T . . A . . . . : 700
GQ339485.1|PUUV|N|Sweden|M.g.|Mangelbo/Mg1/05| : . . . . . T . . C . . . . C . . C . . G . . . . G . . T . . T . . . . T . . A . . T . . . . G . . . . C . . . . . T . . . . . : 700
GQ339486.1|PUUV|N|Sweden|M.g.|Munga/Mg2/05| : . . . . . T . . C . . . . C . . T . . C . . G . . . . T . . T . . . . T . . A . . T . . . . G . . . . C . . . . . T . . . . . : 700
GQ339487.1|PUUV|N|Sweden|M.g.|Munga/Mg16/05| : . . . . . T . . C . . . . C . . T . . C . . G . . . . T . . T . . . . T . . A . . T . . . . G . . . . C . . . . . T . . . . . : 700
AJ223376.1|PUUV|N|Sweden|M.g.|Solleftea/Cg3/95| : . . . . . T . . T . . . . T . . . . . G . . G . . T . . T . . . . T . . A . . T . . . . G . . T . . C . . . . T . . A . . . . : 700
AF367071.1|PUUV|N|Russia|M.r.|CRF366| : . . . . . T . . AT . G . . . . C . . G . . C . . G . . T . . . . T . . . . . T . . A . . T . . . . G . . . . A . . C . . C . . A . . . . T . . . . C . . C . . : 700
AF367064.1|PUUV|N|Russia|M.g.|CG144| : . . . . . T . . AT . G . . . . C . . G . . C . . G . . T . . . . T . . . . . T . . A . . T . . . . G . . . . A . . C . . C . . A . . . . T . . . . C . . C . . : 700
AF367065.1|PUUV|N|Russia|M.g.|CG168| : . . . . . T . . AT . G . . . . C . . G . . C . . G . . T . . . . T . . . . . T . . A . . T . . . . G . . . . A . . C . . C . . A . . . . T . . . . C . . C . . : 700
AF367068.1|PUUV|N|Russia|M.g.|CG315| : . . . . . T . . AT . G . . . . C . . G . . C . . G . . T . . . . T . . . . . T . . A . . T . . . . G . . . . A . . C . . C . . A . . . . T . . . . C . . C . . : 700
AF367069.1|PUUV|N|Russia|M.r.|CRF161| : . . . . . T . . AT . G . . . . C . . G . . C . . G . . T . . . . T . . . . . T . . A . . T . . . . G . . . . A . . C . . C . . A . . . . T . . . . C . . C . . : 700

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*          620          *          640          *          660          *          680          *          700
2014.00598|PUUV|N|France|H.s.|59|FOURMIES| : ATAGTATGCGGTCTATTTCCAACTCAAATTCAAGTACGCAACATAATGAGCCCTGTCATGGGAGTCATTGGGTTTCTTTCTTTGTCAAGGATTGGGCAG : 700
AF367070.1|PUUV|N|Russia|M.r.|CRF308| : .....T..AT.G.....C..G..C..G..T.....T.....A..T....G....A..C..C..A.....T....C...C... : 700
AF367066.1|PUUV|N|Russia|M.g.|CG215| : .....T..AT.G.....C..G..C..G..T.....T.....A..T....G....A..C..C..A.....T....C...C... : 700
AF367067.1|PUUV|N|Russia|M.g.|CG222| : .....T..AT.G.....C..G..C..G..T.....T.....A..T....G....A..C..C..A.....T....C...C... : 700
Z46942.1|PUUV|N|Finland|M.g.|Puumala/1324Cg/79| : .....T.....G..C.....T..T.....C.....T..A..T....G....C..T....A..T....G..A.....C... : 700
Z30702.1|PUUV|N|Finland|M.g.|Evo/12Cg/93| : .....T...T.....G..C.....T..T.....C.....T..A..T....G..T.....C..A..T....A.....C..T. : 700
Z30703.1|PUUV|N|Finland|M.g.|Evo/13Cg/93| : .....T...T.....G..C.....T..T.....C.....T..A..T....G..T.....C..A..T....A.....C..T. : 700
Z30704.1|PUUV|N|Finland|M.g.|Evo/14Cg/93| : .....T...T.....G..C.....T..T.....C.....T..A..T....G..T.....T..C..A..T....A..A.....C..T. : 700
Z30705.1|PUUV|N|Finland|M.g.|Evo/15Cg/93| : .....T...T.....G..C.....T..T.....C.....T..A..T....G..T.....C..A..T....A..A.....C..T. : 700
Z69985.1|PUUV|N|Finland|M.g.|Virrat/25Cg/95| : .....C..T....C..C.....G.....T..T.....C.....T..A..T....G..T.....T....A..T....A..A.....T..T. : 700
JN831947.1|PUUV|N|Finland|Pieksamaki/human_lung/20 : .....T.....G..C.....T..T.....C.....T..A..T....G..T..C..T....A..T....G..A.....C... : 700
JN831943.1|PUUV|N|Finland|Pieksamaki/Mg7/2008| : .....T.....G..C.....T..T.....C.....T..A..T....G..T..C..T....A..T....G..A.....C... : 700
JN831950.1|PUUV|N|Finland|Pieksamaki/human_kidney/ : .....T.....G..C.....T..T.....C.....T..A..T....G..T..C..T....A..T....G..A.....C... : 700
JQ319166.1|PUUV|N|Finland|Konnevesi/Mg_O14B/2005| : .....T.....G..C.....T..T.....C.....T..A.....G..T.....T....A..T....A..A.....C... : 700
JQ319169.1|PUUV|N|Finland|Konnevesi/Mg_O27B/2005| : .....T.....G..C.....T..T.....C.....T..A.....G..T.....T....A..T....A..A.....C... : 700
JQ319167.1|PUUV|N|Finland|Konnevesi/Mg_O15B/2005| : .....T.....G..C.....T..T.....C.....T..A.....G..T.....T....A..T....G..A.....C... : 700
JQ319164.1|PUUV|N|Finland|Konnevesi/Mg_O6B/2005| : .....T.....G..C.....T..T.....C.....T..A.....G..T.....T....A..T....A..A.....C... : 700
JQ319165.1|PUUV|N|Finland|Konnevesi/Mg_O9B/2005| : .....T.....G..C.....T..T.....C.....T..A.....G..T.....T....A..T....A..A.....C... : 700
JQ319170.1|PUUV|N|Finland|Konnevesi/Mg_O74B/2005| : .....T.....G..C.....T..T.....C.....T..A.....G..T.....T....A..T....A..A.....C... : 700
JQ319171.1|PUUV|N|Finland|Konnevesi/Mg_M114B/2005| : .....T.....G..C.....T..T.....C.....T..A.....G..T.....T....A..T....G..A.....C... : 700
AJ238788.1|PUUV|N|Russia|M.g.|Karhumaki| : .....T.....G..C.....T..T.....C.....T..A..T....G..T.....T..C..A..T....A.....T... : 700
AJ238789.1|PUUV|N|Russia|M.g.|Kolodozero| : .....T.....A....G....G.....T..T.....C.....T..A..T....G..T.....T....A.....C..A.....T... : 700
AJ314597.1|PUUV|N|Finland|M.g.|Pallasjarvi/63Cg/98 : .....T.....G.....C..T.....C.....T..A..A....G..T.....T....A.....T.....T... : 700
NC_005224.1|PUUV|N|Finland|M.g.|Sotkamo-revu-NCBI2 : .....T.....T.....C.....G..C..G..T..T.....C.....T..A..T....G.....T....A.....G.....T..T. : 700
AJ238790.1|PUUV|N|Russia|M.g.|Gomselga| : .....T.....T.....C.....G..C.....T..T..T..CG.C..T.....T....G.....T.....A.....G..A..C...T..C : 700
AB010731.1|Hokkaido-V|N|Japan|M.r.|Tobetsu-60Cr-93 : .....C..T..C..T..C..G..A.....T..G..T.....T.....G..T.....A..C..A.....A..A..C...C..T. : 700
AB010730.1|Hokkaido-V|N|Japan|M.r.|Kamiiso-8Cr-95| : .....C..T..C..T..C..G..A.....T..G..T.....T.....G..T.....A..C..A.....T..A..C...C..T. : 700
JX046487.1|Muju-V|N|South-Korea|M.r.|11-5|2011 : ..T.....T..A.....T..A.....TA..A..T.....T..G..G.....G.....C.....A.....A.....T. : 700
JX046484.1|Muju-V|N|South-Korea|M.r.|11-4|2011| : ..T.....T..A.....T..A.....TA..A..T.....T..G..G.....G.....C.....A.....A.....T. : 700
JX028273.1|Muju-V|N|South-Korea|M.r.|11-1|2011| : ..T.....T..A.....T..A.....TA..A..T.....T..A..G.....G.....C.....T.....A.....A.....T. : 700
DQ138128.1|Muju-V|N|South-Korea|E.r.|00-18| : ..T..G..T...T.G..C....A..G..C..G..GA..A....C....T....A.....A..A.....C.....T..A.....TT. : 700
DQ138140.1|Muju-V|N|South-Korea|E.r.|99-27| : ..T..G..T...T.G..C....A..G..C..G..GA..A....C....T....A.....G..A.....C.....T..A.....TT. : 700
DQ138133.1|Muju-V|N|South-Korea|E.r.|96-1| : ..T..G..T...T.G..C....A..G..C..G..GA..A....C....T....A.....A..AA.....C.....G..T..A.....T..T. : 700
DQ138142.1|Muju-V|N|South-Korea|E.r.|99-28| : ..T..G..T...T.G..C....A..G..C..G..GA..A....C....T....A.....A.....G..A.....C.....T..A.....TT. : 700

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						*	820	*	840	*	860	*	880	*	900	
2014.00598	PUUV	N	France	H.s.	59	FOURMIES	:	AATATACTTTATGCAGAGGCAGGAAGTCTGGATAAAAACCATGTTGCTGATATTGATAAGTTGATTGACTATGCAGCCTCAGGAGATCCAACATCACCA	:	900						
2014.00233	PUUV	N	France	H.s.	59	FOURMIES	:	.....T.....	:	900					
2014.00097	PUUV	N	France	H.s.	02	SAINT-MICHEL	:	.....	:	900					
2014.00488	PUUV	N	France	H.s.	08	SIGNY-LE-PETIT	:	.....	:	900					
2014.00613	PUUV	N	France	H.s.	59	FOURMIES	:	.....A.....	:	900					
2015.00402	PUUV	N	France	H.s.	08	CHARLEVILLE-MEZIE	:	.....G.....	:	900					
2015.00422	PUUV	N	France	H.s.	59	ANOR	:	.....	:	900					
2015.00488	PUUV	N	France	H.s.	08	SEDAN	:	.....G.....T.....	:	900					
2015.00498	PUUV	N	France	H.s.	08	REMILLY-AILLICOUR	:	.....	:	900					
2016.00295	PUUV	N	France	H.s.	08	CORNY-MACHEROMENI	:	.....	:	900					
2016.00333	PUUV	N	France	H.s.	59	FOURMIES	:	.....	:	900					
2016.00345	PUUV	N	France	H.s.	59	FOURMIES	:	.....	:	900					
2016.00357	PUUV	N	France	H.s.	02	HIRSON	:	.....	:	900					
2016.00427	PUUV	N	France	H.s.	59	FOURMIES	:	.....	:	900					
2016.00469	PUUV	N	France	H.s.	02	PREMONTRE	:	.....A.....A.....T.....	:	900					
AJ277075.1	PUUV	N	Belgium	M.g.		Montbliart/CG14444	:	.....A.....C.....A.....	:	900					
2014.00053	PUUV	N	France	H.s.	08	SECHEVAL	:	.....G.....T.....	:	900					
KT247593.1	PUUV	N	France	M.g.	08	Ardennes/Mg75/201	:	.....C.....A.....	:	900					
KT247592.1	PUUV	N	France	M.g.	08	Ardennes/Mg156/20	:	.....C.....A.....	:	900					
2015.00019	PUUV	N	France	H.s.	08	ETEIGNIERES	:	.....A.....T.....T.....C.....	:	900					
2016.00239	PUUV	N	France	H.s.	08	VIREUX-MOLHAIN	:	.....T.....A.....T.....C.....	:	900					
2015.00329	PUUV	N	France	H.s.	08	BOGNY-SUR-MEUSE	:	.....C.....A.....	:	900					
2014.00209	PUUV	N	France	H.s.	08	TREMBLOIS-LES-ROC	:	.....C.....A.....C.....C.....	:	900					
2015.00456	PUUV	N	France	H.s.	94	ALFORTVILLE	:	.....C.....A.....	:	900					
2012.00018	PUUV	N	France	H.s.	08	ROCROI	:	.....C.....A.....C.....	:	900					
AJ277032.1	PUUV	N	Belgium	M.g.		Momignies/47Cg/96	:	.....A.....C.....A.....T.....C.....	:	900					
AJ277034.1	PUUV	N	Belgium	M.g.		Couvin/59Cg/97	:	.....C.....A.....	:	900					
AJ277033.1	PUUV	N	Belgium	M.g.		Momignies/55Cg/96	:	.....A.....C.....A.....T.....C.....	:	900					
2012.00638	PUUV	N	France	H.s.	08	GIVET	:	.....T.....A.....C.....A.....	:	900					
2015.00328	PUUV	N	France	H.s.	08	VRIGNE-MEUSE	:	.....AT.....T.....	:	900					
2015.00419	PUUV	N	France	H.s.	08	DOUZY	:	G.....A.....A.....	:	900						
2016.00310	PUUV	N	France	H.s.	08	THIN-LE-MOUTIER	:	.....	:	900					
AJ277030.1	PUUV	N	Belgium	M.g.		Thuin/33Cg/96	:	.....C.....A.....	:	900					
AJ238779.1	PUUV	N	Germany	M.g.		NRW/Cg-Erft	:	.....A.....AT.....C.....C.....T.....	:	900					
2014.00276	PUUV	N	France	H.s.	59	LILLE	:	.....A.....	:	900					
U22423.1	PUUV	N	Belgium	M.g.		CG13891	:	.....T.....A.....A.....A.....G.....T.....A.....T.....T.....	:	900					
2014.00321	PUUV	N	France	H.s.	59	FOURMIES	:	.....	:	900					
2015.00457	PUUV	N	France	H.s.	55	REVIGNY-SUR-ORNAI	:	.....A.....A.....T.....G.....T.....	:	900					
2013.00250	PUUV	N	France	H.s.	62	VENDIN-LS-BTHUNE	:	.....A.....AT.....T.....T.....	:	900					
2016.00282	PUUV	N	France	H.s.	59	MORBECQUE	:	.....A.....G.....T.....T.....C.....	:	900					
AJ277076.1	PUUV	N	Belgium	M.g.		Montbliart/CG14445	:	.....A.....C.....A.....	:	900					
2014.00153	PUUV	N	France	H.s.	02	BUIRONFOSSE	:	.....A.....	:	900					
2014.00171	PUUV	N	France	H.s.	59	SAINT-SAULVE	:	.....A.....A.....A.....T.....	:	900					
2016.00293	PUUV	N	France	H.s.	60	LA-NEUVILLE-SUR-R	:	G.....A.....AT.....C.....T.....C.....	:	900						
2014.00499	PUUV	N	France	H.s.	94	CHAMPIGNY-SUR-MAR	:	.....A.....A.....C.....C.....	:	900					
2012.00057	PUUV	N	France	H.s.	59	COUSOLRE	:	.....T.....A.....	:	900					
2012.00349	PUUV	N	France	H.s.	02	ENGLANCOURT	:	.....A.....C.....	:	900					
2014.00135	PUUV	N	France	H.s.	02	ATHIES-SOUS-LAON	:	.....A.....A.....C.....C.....	:	900					
2014.00184	PUUV	N	France	H.s.	59	FOURMIES	:	.....A.....C.....C.....	:	900					
2016.00182	PUUV	N	France	H.s.	08	BOULZICOURT	:	.....A.....C.....A.....	:	900					
2016.00286	PUUV	N	France	H.s.	02	TRUCY	:	.....A.....A.....C.....C.....	:	900					
2016.00325	PUUV	N	France	H.s.	59	AULNOYE-AYMERIES	:	.....A.....	:	900					
2016.00452	PUUV	N	France	H.s.	02	LAON	:	.....A.....A.....C.....C.....	:	900					
2016.00467	PUUV	N	France	H.s.	02	AISNE	:	.....A.....C.....C.....G.....	:	900					

	*	820	*	840	*	860	*	880	*	900						
2014.00598	|	PUUV	|	N	|	France	|	H.s.	|	59	|	FOURMIES	:	AATATACTTTATGCAGAGGCAGGAAGTGTGGATAAAAACCATGTTGCTGATATTGATAAGTTGATTGACTATGCAGCCTCAGGAGATCCAACATCACCA	:	900
GQ339477.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Aijajarvi	|	Mg9/05	:	.G.T....CC.AG.CC.C..AA.T..T.....T...A....C.....A.....T.....	:	900
GQ339478.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Jockfall	|	Mg12/05	:	.G.C..T..CC.AG.CC.C..AA.T..T.A..C..G..T.....G.....C.....A.....T.....	:	900
GQ339482.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Kalvudden	|	Mg27/05	:	.G.C..T..CC.AG.CC.C..AA.T..T.A.....T...A.....C.....A.....T.....	:	900
GQ339479.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Moskosel	|	Mg17/05	:	.G.C..T..CT..G.CC.T..AA.T..T.A..C.....T...G..C..C.....A.....T.....	:	900
GQ339481.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Ljustask	|	Mg20/05	:	.G.C..T..CT..G.CC.T..AA.T..T.A..C.....T...G..C.....A.....T.....	:	900
GQ339480.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Gyttjea	|	Mg19/05	:	.G.C..T..CT..G.CC.T..AACT..T..T.C.....T...G..C..C.....A.....T.....	:	900
AY526219.1	|	PUUV	|	N	|	Sweden	|	Human	|	Umea	|	hu	:	.G.T.....G.CC.C..AA.T..C.A.....G..T.....G.....C.....A.A.....T.....	:	900
AJ223380.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Tavelsjo	|	Cg81/94	:	.G.T.....G.CC.C..AATT..T.A.....T...G.....T.....G.....A.A.....T.....	:	900
U14137.1	|	PUUV	|	N	|	Bosnia-H.	|	M.g.	|	Vranica	|		:	.G.T.....G.CC.C..AA.T..T.A.....T...G.....T.....G.....A.A.....T.....	:	900
AJ223371.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Huggberget	|	Cg36/94	:	.G.C.....G.CC.C..A.T..T.A.....T...G..A..C.....A.A.....T.....	:	900
Z48586.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Vindeln	|	L20Cg/83	:	.G.T.....G.CC.C..AA.T..T.A.....T...G.....C.....A.A..C.....T.....	:	900
AJ223374.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Mellansel	|	Cg47/94	:	.G.T.....G.CC.C..AA.T..CT.A.....G..T.....G.....C.....A.....T.....	:	900
AJ223375.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Mellansel	|	Cg49/94	:	.G.T.....G.CC.C..AA.T..CT.A.....G..T.....G.....C.....A.....T.....	:	900
AJ238791.1	|	PUUV	|	N	|	Denmark	|	M.g.	|	Fyn	|	19	:	GG.T.....C..A.TC.C.....T..A..T.....G..T.....C.....C..A..A.....A.....T.....	:	900
AJ278092.1	|	PUUV	|	N	|	Denmark	|	M.g.	|	Fyn	|	47	:	GG.T.....A.TC.C.....T.....T.....G..T.....A.....C.....AC...A.....A.....T.....	:	900
AJ278093.1	|	PUUV	|	N	|	Denmark	|	M.g.	|	Fyn	|	131	:	GG.T.....A.TC.C.....T.....T.....G..T.....A.....C.....AC...A.....A.....T.....	:	900
AJ223368.1	|	PUUV	|	N	|	Norway	|	M.g.	|	Eidsvoll	|	1124v	:	GG...T..C....AC.C.....T..C..T..C.....T...G.....AC.T...T.....C.....	:	900
AJ223369.1	|	PUUV	|	N	|	Norway	|	M.g.	|	Eidsvoll	|	Cg1138/87	:	GG...T..C....AC.C.....T..C..T..C.....T...G.....AC.T...T.....C.....	:	900
JN657228.1	|	PUUV	|	N	|	Latvia	|	M.g.	|	Jelgava	|	Mg149/2008	:	GG.T.....C....AC.C.....T.....T..C..G..T.....G.....C..C.....T.....	:	900
KX757839.1	|	PUUV	|	N	|	Lithuania	|	M.g.	|	LT15/164	|	2015	:	.G.T..T.....AC.C.....T.....T.....G.....G.....A.....G..C.....	:	900
KX757840.1	|	PUUV	|	N	|	Lithuania	|	M.g.	|	LT15/174	|	2015	:	.G.T..T.....AC.T.....T..A..T.....G.....G.....A..A.....C.....	:	900
KX815394.1	|	PUUV	|	N	|	Poland	|	M.g.	|	KS13/855	|	2009	:	GG.T..T..C.....C.C.....T.....T..C..G..T.....G.....C..A.....C.....	:	900
KX757841.1	|	PUUV	|	N	|	Lithuania	|	M.g.	|	LT15/201	|	2015	:	.G.T..T.....AC.C.....T.....T.....G.....G.....A.....G..C.....	:	900
AJ314598.1	|	PUUV	|	N	|	Russia	|	M.g.	|	Baltic	|	49Cg/00	:	.G.G.....A.CC.C.....T..C..T..C.....T...G.....C.....C..A.....T.....	:	900
AJ314599.1	|	PUUV	|	N	|	Russia	|	M.g.	|	Baltic	|	205Cg/00	:	.G.G.....A.CC.C.....T..C..T..C.....T...G.....C.....C..A.....T.....	:	900
JN657229.1	|	PUUV	|	N	|	Latvia	|	M.g.	|	Madona	|	Mg99/2008	:	.G.....A.CC.T.....T..C..T..G.....G.....C..C.....AC.A.....T.....	:	900
JN657232.1	|	PUUV	|	N	|	Latvia	|	M.g.	|	Madona	|	Mg233/2008	:	.G.....A.CC.T.....T..C..T..G.....G.....C..C.....AC.A.....T.....	:	900
JN657230.1	|	PUUV	|	N	|	Latvia	|	M.g.	|	Jelgava	|	Mg136/2008	:	.G.....A.CC.T.....T..C..C.....G.....G.....C..C.....AC.A.....T.....	:	900
JN657231.1	|	PUUV	|	N	|	Latvia	|	M.g.	|	Jelgava	|	Mg140/2008	:	.G.....A.CC.T.....T..C..C.....G.....G.....C..C.....AC.A.....T.....	:	900
Z30707.1	|	PUUV	|	N	|	Russia	|	M.g.	|	Udmurtia	|	458Cg/88	:	GG.T..T..C....ACTC.C..A..T..T..T.....T...G.....C.....A.....T.....	:	900
Z30706.1	|	PUUV	|	N	|	Russia	|	M.g.	|	Udmurtia	|	444Cg/88	:	GG.T..T..C....ACTC.C..A..T..T..T.....T...G.....C.....A.....T.....	:	900
Z84204.1	|	PUUV	|	N	|	Russia	|	M.g.	|	Kazan	|		:	GG.T..T..C....ACTC.C..A..T..T..T.....T...G.....C.....A.....T.....	:	900
Z30708.1	|	PUUV	|	N	|	Russia	|	M.g.	|	Udmurtia	|	338Cg/92	:	GG.T..T..C....ACTC.C..A..T..T..T.....T...G.....C.....A.....T.....	:	900
Z21497.1	|	PUUV	|	N	|	Russia	|	M.g.	|	Udmurtia	|	894Cg/91	:	GG.T..T..C....ACTC.C..A..T..T..T.....T...G.....C.....A.....T.....	:	900
AB433843.2	|	PUUV	|	N	|	Russia	|	M.g.	|	Samara	|	49/CG/2005	:	.G.T..T..C....ACCC.C..A..T..T..T.....T...G.....C.....C.....A.....T.....	:	900
AB433845.2	|	PUUV	|	N	|	Russia	|	M.g.	|	Samara	|	94/CG/2005	:	.G.T..T..C....ACCC.C..A..T..T..T.....T...G.....C.....C.....A.....T.....	:	900
L11347.1	|	PUUV	|	N	|	Russia	|	Human	|	P360	|		:	.G.T..T..C....ACCC.C.....T..T..T..C.....T...G.....C.....C.....T.....	:	900
AB297665.2	|	PUUV	|	N	|	Russia	|	M.g.	|	DTK/Ufa	|	97|1997	:	.G.T..T..C....ACCC.C.....T..T..T..C.....T...G.....C.....C.....T.....	:	900
M32750.1	|	PUUV	|	N	|	Russia	|	M.g.	|	CG1820	|		:	.G.T..T..C....ACCC.C.....T..T..T..C.....T...G.....C.....C.....T.....	:	900
AF442613.1	|	PUUV	|	N	|	Russia	|	M.g.	|	CG17/Baskiria	|	2001	:	.G.T..T..C....ACCC.C.....T..T..T..C.....T...G.....C.....C.....T.....	:	900
KX815395.1	|	PUUV	|	N	|	Poland	|	M.g.	|	KS14/118	|	2009	:	.G.T..T..C....A.TC.C..A..T..T..C..G.....G.....C.....A..A.....C.....	:	900
GQ339483.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Bergsjobo	|	Mg25/05	:	G..C..T.....C.C..A..T.....T..C.....T...G.....C..C.....T.....	:	900
AJ223377.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Solleftea	|	Cg6/95	:	G..C..T.....C.C..A..T.....T..C.....T...G.....C..C.....T.....	:	900
GQ339484.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Faboviken	|	Mg26/05	:	G..C..T.....C.C.....T.....T.....T...G.....C..C.....T.....	:	900
GQ339485.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Mangelbo	|	Mg1/05	:	G..C.....AC.T.....T..A..T..C.....T...G.....C..A.....T.....	:	900
GQ339486.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Munga	|	Mg2/05	:	G..C.....AC.T.....T.....T..C.....T...G.....C..A.....T.....	:	900
GQ339487.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Munga	|	Mg16/05	:	G..C.....AC.T.....T.....T..C.....T...G.....C..A.....T.....	:	900
AJ223376.1	|	PUUV	|	N	|	Sweden	|	M.g.	|	Solleftea	|	Cg3/95	:	G..C.....C.....C.....T.....T.....T...G..A..C.....A.....T.....	:	900
AF367071.1	|	PUUV	|	N	|	Russia	|	M.r.	|	CRF366	|		:	..C..T.....TC.A.....T.....T.....T...G..A..C.....T.....T..G.....	:	900
AF367064.1	|	PUUV	|	N	|	Russia	|	M.g.	|	CG144	|		:	..C..T.....TC.A.....T.....T.....T...G..A..C.....T.....T..G.....	:	900
AF367065.1	|	PUUV	|	N	|	Russia	|	M.g.	|	CG168	|		:	..C..T.....TC.A.....T.....T.....T...G..A..C.....T.....T..G.....	:	900
AF367068.1	|	PUUV	|	N	|	Russia	|	M.g.	|	CG315	|		:	..C..T.....TC.A.....T.....T.....T...G..A..C.....T.....T..G.....	:	900
AF367069.1	|	PUUV	|	N	|	Russia	|	M.r.	|	CRF161	|		:	..C..T.....TC.A.....T.....T.....T...G..A..C.....T.....T..G.....	:	900

	*	820	*	840	*	860	*	880	*	900	
2014.00598|PUUV|N|France|H.s.|59|FOURMIÉS|	:	AATATACTTTATGCAGAGGCAGGAAGTGTGGATAAAAACCATGTTGCTGATATTGATAAGTTGATTGACTATGCAGCCTCAGGAGATCCAACATCACCA	:	900							
AF367070.1|PUUV|N|Russia|M.r.|CRF308|	:	...C..T.....TC.A....T....T.....T....G..A..C..G.....T.....T..G....T	:	900							
AF367066.1|PUUV|N|Russia|M.g.|CG215|	:	...C..T.....TC.A....T....T.....T....G..A..C..C.....T.....T..G....T	:	900							
AF367067.1|PUUV|N|Russia|M.g.|CG222|	:	...C..T.....TC.A....T....T.....T....G..A..C..C.....T.....T..G....T	:	900							
Z46942.1|PUUV|N|Finland|M.g.|Puumala/1324Cg/79|	:	G..C.....C..T....T....T....C....T....G..A..C.....A.....T..T..C..T....T	:	900							
Z30702.1|PUUV|N|Finland|M.g.|Evo/12Cg/93|	:	G..C.....C..C....T....T....C....T....G..A..C..C.....C.A.....T....C..C....T	:	900							
Z30703.1|PUUV|N|Finland|M.g.|Evo/13Cg/93|	:	G..C.....C..C....T....T....C....T....G..A..C..C.....C.A.....T....C..C....T	:	900							
Z30704.1|PUUV|N|Finland|M.g.|Evo/14Cg/93|	:	G..C.....C..C....T....T....C....T....G..A..C..C.....C.A.....T....GC..C....T	:	900							
Z30705.1|PUUV|N|Finland|M.g.|Evo/15Cg/93|	:	G..C.....C..C....T....T....C....T....G..A..C..C.....C.A.....T....C..C....T	:	900							
Z69985.1|PUUV|N|Finland|M.g.|Virrat/25Cg/95|	:	...C..T..C.....C..C..A..T..A..T..C..G..T....G..A..C.....AC.A.....T.....C.....T	:	900							
JN831947.1|PUUV|N|Finland|Pieksamaki/human_lung/20|	:	G..T.....C..C....T..A..T.....T....G..A.....A.....T..T..C..C..G....T	:	900							
JN831943.1|PUUV|N|Finland|Pieksamaki/Mg7/2008|	:	G..T.....C..C....T..A..T.....T....G..A.....A.....T..T..C..C..G....T	:	900							
JN831950.1|PUUV|N|Finland|Pieksamaki/human_kidney/|	:	G..T.....C..C....T..A..T.....T....G..A.....A.....T..T..C..C..G....T	:	900							
JQ319166.1|PUUV|N|Finland|Konnesesi/Mg_O14B/2005|	:	...T.....C..C....T..A..T..C....T....G..A..C.....C..T..C..T....T	:	900							
JQ319169.1|PUUV|N|Finland|Konnesesi/Mg_O27B/2005|	:	...T.....C..C....T..A..T..C....T....G..A..C.....C..T..C..T....T	:	900							
JQ319167.1|PUUV|N|Finland|Konnesesi/Mg_O15B/2005|	:	...T.....C..C....T..A..T..C....T....G..A..C.....C..T..C..T....T	:	900							
JQ319164.1|PUUV|N|Finland|Konnesesi/Mg_O6B/2005|	:	...T.....C..C....T..A..T..C....T....G..A..C.....C..T..C..T....T	:	900							
JQ319165.1|PUUV|N|Finland|Konnesesi/Mg_O9B/2005|	:	...T.....C..C....T..A..T..C....T....G..A..C.....C..T..C..T....T	:	900							
JQ319170.1|PUUV|N|Finland|Konnesesi/Mg_O74B/2005|	:	...T.....C..C....T..A..T..C....T....G..A..C.....G..T..C..T....T	:	900							
JQ319171.1|PUUV|N|Finland|Konnesesi/Mg_M114B/2005|	:	...T.....C..C....T..A..T..C....T....G..A..C.....C..T..C..T....T	:	900							
AJ238788.1|PUUV|N|Russia|M.g.|Karhumaki|	:	G..C..T..C.....C..C..A..T..A..T..C....T....G..A..C.....A....TCTC....T..T....C..T....T	:	900							
AJ238789.1|PUUV|N|Russia|M.g.|Kolodozero|	:	G..C..T..C.....C..C..A..T..T..C....T....G..C..C....C..C..A.....T....C..T..G....T	:	900							
AJ314597.1|PUUV|N|Finland|M.g.|Pallasjarvi/63Cg/98|	:	G..C..T..C.....C..C....T....T..C....T....G..A..C.....A.....T....C..C....G...	:	900							
NC_005224.1|PUUV|N|Finland|M.g.|Sotkamo-revu-NCBI2|	:	G..C.....C..C....T....T..C....T....G..A..C....C....A.....T....C..T....T	:	900							
AJ238790.1|PUUV|N|Russia|M.g.|Gomselga|	:	G..C..T..C.....C..C....T....T..C....T....G..A..C....C....CA.....T..A....C..T....T	:	900							
AB010731.1|Hokkaido-V|N|Japan|M.r.|Tobetsu-60Cr-93|	:	.G..T....C....AC....A..T....T....G..T....CC..C..C....AC.A.....T.....T..G....T	:	900							
AB010730.1|Hokkaido-V|N|Japan|M.r.|Kamiiso-8Cr-95|	:	.G..T....C....AC....T....T....G..T....CC..C..C....AC.A.....T.....C.....T	:	900							
JX046487.1|Muju-V|N|South-Korea|M.r.|11-5|2011|	:	G..C..T..C....AGC..A..A..T..CT.....T.....C....C.....C.....T.....C.....T	:	900							
JX046484.1|Muju-V|N|South-Korea|M.r.|11-4|2011|	:	G..C..T..C....AGC..A..A..T..CT.....T.....C....C.....C.....T.....C.....T	:	900							
JX028273.1|Muju-V|N|South-Korea|M.r.|11-1|2011|	:	G..C..T..C....AGC..A..A..T..C.....T.....C....C.....C.....T.....C.....T	:	900							
DQ138128.1|Muju-V|N|South-Korea|E.r.|00-18|	:	G..C..T..C....A..T....A..T..CT.A....G..T....C....C.....A.....T.....T.....T	:	900							
DQ138140.1|Muju-V|N|South-Korea|E.r.|99-27|	:	G..C..T..C....A..T....A..T..CT.A....G..T....C....C.....AC.....T.....T.....T	:	900							
DQ138133.1|Muju-V|N|South-Korea|E.r.|96-1|	:	G..C..T..C....A..T....A..T..CT.A....G..T....AC.....AC.....T.....T.....T	:	900							
DQ138142.1|Muju-V|N|South-Korea|E.r.|99-28|	:	G..C..T..C....A..T....A..T..CT.A....G..T....C....C.....AC.....T.....T.....T	:	900							

	*	920	*	940	*	960	*	980	*	1000
2014.00598|PUUV|N|France|H.s.|59|FOURMIES|	:	GATAATATTGAAGCCCCGAATGCACCCCTGGGTGTTTGTCTGTGCACCCGACCCGGTGCCACCCAGCATGTATTATGTGTCAGGGATGGCTGAAGTGGTG	:	1000						
2014.00233|PUUV|N|France|H.s.|59|FOURMIES|	:	A	:	1000						
2014.00097|PUUV|N|France|H.s.|02|SAINT-MICHEL|	:		:	1000						
2014.00488|PUUV|N|France|H.s.|08|SIGNY-LE-PETIT|	:	T	:	1000						
2014.00613|PUUV|N|France|H.s.|59|FOURMIES|	:		:	1000						
2015.00402|PUUV|N|France|H.s.|08|CHARLEVILLE-MEZIE|	:	A	:	1000						
2015.00422|PUUV|N|France|H.s.|59|ANOR|	:		:	1000						
2015.00488|PUUV|N|France|H.s.|08|SEDAN|	:	A	:	1000						
2015.00498|PUUV|N|France|H.s.|08|REMILLY-AILLICOUR|	:		:	1000						
2016.00295|PUUV|N|France|H.s.|08|CORNAY-MACHEROMENI|	:	A	:	1000						
2016.00333|PUUV|N|France|H.s.|59|FOURMIES|	:		:	1000						
2016.00345|PUUV|N|France|H.s.|59|FOURMIES|	:		:	1000						
2016.00357|PUUV|N|France|H.s.|02|HIRSON|	:		:	1000						
2016.00427|PUUV|N|France|H.s.|59|FOURMIES|	:	T	:	1000						
2016.00469|PUUV|N|France|H.s.|02|PREMONTRE|	:	A	:	1000						
AJ277075.1|PUUV|N|Belgium|M.g.|Montbliart/CG14444|	:	A	:	1000						
2014.00053|PUUV|N|France|H.s.|08|SECHEVAL|	:	A	:	1000						
KT247593.1|PUUV|N|France|M.g.|08|Ardennes/Mg75/201|	:	A	:	1000						
KT247592.1|PUUV|N|France|M.g.|08|Ardennes/Mg156/20|	:	A	:	1000						
2015.00019|PUUV|N|France|H.s.|08|ETEIGNIERES|	:	A	:	1000						
2016.00239|PUUV|N|France|H.s.|08|VIREUX-MOLHAIN|	:	A	:	1000						
2015.00329|PUUV|N|France|H.s.|08|BOGNY-SUR-MEUSE|	:	A	:	1000						
2014.00209|PUUV|N|France|H.s.|08|TREMBOIS-LES-ROC|	:	A	:	1000						
2015.00456|PUUV|N|France|H.s.|94|ALFORTVILLE|	:	A	:	1000						
2012.00018|PUUV|N|France|H.s.|08|ROCROI|	:	A	:	1000						
AJ277032.1|PUUV|N|Belgium|M.g.|Momignies/47Cg/96|	:	C	:	1000						
AJ277034.1|PUUV|N|Belgium|M.g.|Couvin/59Cg/97|	:	A	:	1000						
AJ277033.1|PUUV|N|Belgium|M.g.|Momignies/55Cg/96|	:	C	:	1000						
2012.00638|PUUV|N|France|H.s.|08|GIVET|	:	C	:	1000						
2015.00328|PUUV|N|France|H.s.|08|VRIGNE-MEUSE|	:	A	:	1000						
2015.00419|PUUV|N|France|H.s.|08|DOUZY|	:	A	:	1000						
2016.00310|PUUV|N|France|H.s.|08|THIN-LE-MOUTIER|	:	A	:	1000						
AJ277030.1|PUUV|N|Belgium|M.g.|Thuin/33Cg/96|	:	C	:	1000						
AJ238779.1|PUUV|N|Germany|M.g.|NRW/Cg-Erft|	:	G	:	1000						
2014.00276|PUUV|N|France|H.s.|59|LILLE|	:	C	:	1000						
U22423.1|PUUV|N|Belgium|M.g.|CG13891|	:	C	:	1000						
2014.00321|PUUV|N|France|H.s.|59|FOURMIES|	:		:	1000						
2015.00457|PUUV|N|France|H.s.|55|REVIGNY-SUR-ORNAI|	:	A	:	1000						
2013.00250|PUUV|N|France|H.s.|62|VENDIN-LS-BTHUNE|	:	GT	:	1000						
2016.00282|PUUV|N|France|H.s.|59|MORBECQUE|	:	GT	:	1000						
AJ277076.1|PUUV|N|Belgium|M.g.|Montbliart/CG14445|	:	A	:	1000						
2014.00153|PUUV|N|France|H.s.|02|BUIRONFOSSE|	:	A	:	1000						
2014.00171|PUUV|N|France|H.s.|59|SAINT-SAULVE|	:	G	:	1000						
2016.00293|PUUV|N|France|H.s.|60|LA-NEUVILLE-SUR-R|	:	GT	:	1000						
2014.00499|PUUV|N|France|H.s.|94|CHAMPIGNY-SUR-MAR|	:	A	:	1000						
2012.00057|PUUV|N|France|H.s.|59|COUSOLRE|	:	A	:	1000						
2012.00349|PUUV|N|France|H.s.|02|ENGLANCOURT|	:	A	:	1000						
2014.00135|PUUV|N|France|H.s.|02|ATHIES-SOUS-LAON|	:	A	:	1000						
2014.00184|PUUV|N|France|H.s.|59|FOURMIES|	:	A	:	1000						
2016.00182|PUUV|N|France|H.s.|08|BOULZICOURT|	:	A	:	1000						
2016.00286|PUUV|N|France|H.s.|02|TRUCY|	:	A	:	1000						
2016.00325|PUUV|N|France|H.s.|59|AULNOYE-AYMERIES|	:	A	:	1000						
2016.00452|PUUV|N|France|H.s.|02|LAON|	:	A	:	1000						
2016.00467|PUUV|N|France|H.s.|02|AISNE|	:	A	:	1000						

	*	920	*	940	*	960	*	980	*	1000	
2014.00598	PUUV	N	France	H.s.	|59	FOURMIES	:	GATAATATTGAAGCCCCGAATGCACCCCTGGGTGTTTGTCTGTGCACCCGACCCGGTGCCACCCGACATGTATTATGTGTCAGGGATGGCTGAACTAGGTG	:	1000	
2015.00657	PUUV	N	France	H.s.	|02	CILLY	:	.....G.....a.....A.....T.T.A.....A.....C.....CA.T.....GT...C.	:	1000
2015.00526	PUUV	N	France	H.s.	|08	MONTHERME	:	.....A.....A.....A.....C.....G.T.....A.....T.....T.....	:	1000
2015.00045	PUUV	N	France	H.s.	|59	FOURMIES	:	.....a.....C.....T.....A.....T.....T.....	:	1000
2015.00430	PUUV	N	France	H.s.	|02	MONTCORNET	:	.....A.....A.....C.....G.T.....A.....T.....	:	1000
2016.00311	PUUV	N	France	H.s.	|02	LAON	:	.....A.....A.....C.....G.T.....A.....T.....	:	1000
AJ277031.1	PUUV	N	Belgium	M.g.	|Montbliart/23Cg/96		:	.....A.....A.....C.....T.....A.....T.....	:	1000
2016.00326	PUUV	N	France	H.s.	|02	LAON	:	.....A.....A.....C.....G.T.....A.....T.....	:	1000
2016.00353	PUUV	N	France	H.s.	|02	CESSIERES	:	.....A.....A.....C.....G.T.....A.....T.....	:	1000
2012.00061	PUUV	N	France	H.s.	|02	LANISCOURT	:	.....A.....A.....C.....G.T.....A.....T.....	:	1000
2014.00174	PUUV	N	France	H.s.	|02	ST-ERME-OUTRE-ET-	:	.....A.....A.....C.....G.T.....A.....T.....	:	1000
2016.00268	PUUV	N	France	H.s.	|02	PRESLES-ET-THIERN	:	.....A.....A.....C.....G.T.....A.....T.....	:	1000
2015.00660	PUUV	N	France	H.s.	|02	VIC-SUR-AISNE	:	.....A.....C.....T.T.....T.....T.....	:	1000
2012.00025	PUUV	N	France	H.s.	|51	SAINTE-MENEHOULD	:	.....C.GT...T.....T.....A.....T.T.T.A.....A.....A.....A.GT.....	:	1000
2015.00665	PUUV	N	France	H.s.	|51	REIMS	:	.....GT...T.....T.....A.....A.....C.T.T.A.....A.G.....A.....A.GT.....	:	1000
2012.00307	PUUV	N	France	H.s.	|54	COLOMBEY-LES-BELL	:	.....C.....GT...T.....T.....T.T.T.A.....A.....C.....A.....A.....A.T.....	:	1000
2012.00123	PUUV	N	France	H.s.	|55	BAR-LE-DUC	:	.....GT...T.....T.....A.....T.T.T.A.....A.....A.....A.T.....	:	1000
2012.00278	PUUV	N	France	H.s.	|51	REIMS	:	.....GT...T.....T.....A.....A.....T.T.T.A.....A.G.C.....A.....A.T.....	:	1000
2015.00185	PUUV	N	France	H.s.	|68	FELLERING	:	.....GT...T.....T.....A.....T.T.T.A.....A.....C.....A.....A.....A.T.....	:	1000
KJ994776.1	PUUV	N	Germany	M.g.	|Mu/07/1219|2007		:	.....C.C.....T.T.T.....A.....C.....C.T.T.A.....A.....A.....A.GT.....	:	1000
2012.00086	PUUV	N	France	H.s.	|58	CHEVROCHES	:	.....T.A.T.....T.....A.....c.....C.t.T.A.....T.A.....a.gT.....	:	1000
KT247595.1	PUUV	N	France	M.g.	|45	Orleans/Mg29/2010	:	.....GT.A.C.....T.....A.C.C.....C.T.T.A.....T.A.....A.....T.....	:	1000
KT247594.1	PUUV	N	France	M.g.	|45	Orleans/Mg23/2010	:	.....GT.A.C.....T.....A.C.C.....C.T.T.A.....T.A.....A.....T.....	:	1000
KY365004.1	PUUV	N	France	M.g.	|45	Orleans/NCHA373/2	:	.....C.GT.A.C.....T.....A.C.C.....C.T.T.A.....T.A.....C.....A.GT.....	:	1000
2012.00301	PUUV	N	France	H.s.	|25	MOUTHE	:	.....C.....GT...T.....T.....C.....C.T.T.A.....A.....C.....A.....A.....	:	1000
AM695638.1	PUUV	N	France	M.g.	|Mignovillard/CgY02/2		:	.....C.....GT...T.....T.....C.....C.T.T.A.....A.....C.....A.....A.....	:	1000
KT247597.1	PUUV	N	France	M.g.	|39	Jura/Mg214/2010	:	.....GT.T.T.....T.....C.....C.T.T.A.....A.....C.....A.....A.....	:	1000
KT247596.2	PUUV	N	France	M.g.	|39	Jura/Mg2/2010	:	.....GT.T.T.....T.....C.....C.T.T.A.....A.....C.....A.....A.....	:	1000
2012.00102	PUUV	N	France	H.s.	|39	COISERETTE	:	.....GT.T.T.....G.....C.....C.T.T.A.....A.....C.....A.....A.T.....	:	1000
2012.00536	PUUV	N	France	H.s.	|39	LA-PESSE	:	.....GT.T.T.....G.....C.....C.T.T.A.....A.....C.....A.....A.....	:	1000
2014.00622	PUUV	N	France	H.s.	|39	ARBOIS	:	.....GT...T.....T.....C.....C.T.T.A.....A.....C.....A.....A.....	:	1000
2015.00567	PUUV	N	France	H.s.	|70	RIOZ	:	.....GT.T.T.....T.....C.....C.T.T.A.....A.....C.....A.....A.T.....	:	1000
2014.00637	PUUV	N	France	H.s.	|25	SAULES	:	.....GT.T.T.....T.....C.....C.T.T.A.....A.....C.....A.....A.T.....	:	1000
2012.00396	PUUV	N	France	H.s.	|39	SAINTE-CLAUDE	:	.....GT...T.....T.....C.....C.T.T.A.....A.....C.....A.....A.....	:	1000
2014.00120	PUUV	N	France	H.s.	|38	LE-MOUTARET	:	.....GT...T.....T.....C.....C.T.T.A.....A.....C.....A.....A.....	:	1000
2015.00153	PUUV	N	France	H.s.	|73	GREZY-SUR-ISERE	:	.....GT...T.....T.....C.....C.T.T.A.....A.....C.....A.....A.....	:	1000
2015.00504	PUUV	N	France	H.s.	|70	RONCHAMP	:	.....C.....GT.T.T.....A.....A.....T.T.T.A.....C.....A.....A.T.....	:	1000
2016.00275	PUUV	N	France	H.s.	|21	JALLANGES	:	.....GT.T.T.....T.....C.....C.T.T.A.....A.....C.....A.....A.....	:	1000
2016.00320	PUUV	N	France	H.s.	|25	SAINT-VIT	:	.....C.....GT.T.T.G.....T.....C.....C.T.T.A.....A.....C.....A.....A.....	:	1000
2015.00410	PUUV	N	France	H.s.	|70	ANGIREY	:	.....C.....GT.T.T.....T.....A.....A.....T.T.T.A.....C.....A.....A.T.....	:	1000
DQ016430.2	PUUV	N	Germany	M.g.	|Bavaria/CG33/04		:	.....C.C.....GT.T.T.....C.A.....A.....A.....C.T..A.A.....A.T.....A.....A.GT.....	:	1000
DQ016432.2	PUUV	N	Germany	M.g.	|Bavaria/CG41/04		:	.....C.C.....GT.T.T.....C.A.....A.....A.....C.T..A.A.....A.T.....G.A.....A.GT.....	:	1000
AY954723.2	PUUV	N	Germany	M.g.	|Bavaria-CG34/04		:	.....C.C.....GT.T.A.....C.A.....A.....A.....C.T..A.A.....A.T.....G.A.....A.GT.....	:	1000
AY954722.2	PUUV	N	Germany	M.g.	|Bavaria-CG9/04		:	.....C.C.....GT.T.T.....C.A.....A.....A.....C.T..A.A.....A.T.....A.....A.GT.....	:	1000
2012.00402	PUUV	N	France	H.s.	|60	GOUVIEUX	:	.....C.....gT.T.T.....T.....C.....T.t.t.A.....A.....A.....A.GT.....	:	1000
2014.00540	PUUV	N	France	H.s.	|60	CHAMBLY	:	.....GT.T.T.....T.....C.....T.T.T.A.....A.....A.....A.GT.....	:	1000
AJ314600.1	PUUV	N	Balkan	M.g.	|Balkan-1		:	.....C.C.A...T...T.....A.....A.....A.....T.A.TA...T...A.....C.....T.....	:	1000
AJ314601.1	PUUV	N	Balkan	M.g.	|Balkan-2		:	.....C.C.A...T...T.....A.....A.C.A...T.A.TA...T...A.....C.C.....T.....	:	1000
FN377821.1	PUUV	N	Hungary	M.g.	|Mg9/HungaryTR17/00		:	.....C.C.A...T...T.....A.....A.....A.....T.A.TA...T...A.....C.C.....T.....	:	1000
FN377822.1	PUUV	N	Hungary	M.g.	|Mg23/HungaryTR17/00		:	.....C.C.A...T...T.....A.....A.....A.....T.A.TA...T...A.....C.C.....T.....	:	1000
GQ339473.1	PUUV	N	Sweden	M.g.	|Kiviniemi/Mg3/05		:	.....C.....T.T.T.....T.....A.....T.....A.....T.T.T.....A.C.....C.....A.....A.C.....	:	1000
GQ339474.1	PUUV	N	Sweden	M.g.	|Kiviniemi/Mg5/05		:	.....C.....T.T.T.....T.....A.....T.....A.....T.T.T.....A.C.....C.....A.....A.C.....	:	1000
GQ339475.1	PUUV	N	Sweden	M.g.	|Kiviniemi/Mg6/05		:	.....C.....T.T.T.....T.....A.....T.....A.....T.T.T.....A.C.....C.....A.....A.C.....	:	1000
GQ339476.1	PUUV	N	Sweden	M.g.	|Aijajarvi/Mg7/05		:	.....C.....T.T.T.....T.....A.....T.....A.....T.T.T.....A.C.....C.....A.....A.C.....	:	1000

* 920 * 940 * 960 * 980 * 1000

2014.00598|PUUV|N|France|H.s.|59|FOURMIES| : GATAATATTGAAGCCCCGAATGCACCCCTGGGTGTTTGTCTGTGCACCCGACCCGGTGCCACCCGACATGTATTATGTGTCAGGGATGGCTGAACTAGGTG : 1000

GQ339477.1|PUUV|N|Sweden|M.g.|Aijajarvi/Mg9/05| :C.....T.T.T.....A.....T.....A.....T.T.T.....A.C.....C.....A.....A.....C..... : 1000

GQ339478.1|PUUV|N|Sweden|M.g.|Jockfall/Mg12/05| : ..C..C.....T.T..C.....A.....T.....A.....C..T.T.....A.T..C..C.....A.....A.....T..... : 1000

GQ339482.1|PUUV|N|Sweden|M.g.|Kalvudden/Mg22/05| : ..C.....T.....T.....A.....T.....A.....C..T.T.....A.T.....C.....A.....T..... : 1000

GQ339479.1|PUUV|N|Sweden|M.g.|Moskosel/Mg17/05| : ..C..C..C..T.T.T.....A.....T.....A.....C..T.T.....A.C.....C.....A.....A.....T..... : 1000

GQ339481.1|PUUV|N|Sweden|M.g.|Ljustrask/Mg20/05| : ..C..C..C..T.....T.....A.....T.....A.....C..T.T.....A.C.....C.....A.....A.....T..... : 1000

GQ339480.1|PUUV|N|Sweden|M.g.|Gyttjea/Mg19/05| : ..C..C..C..T.T.T.....A.....T.....A.....C..T.T.....C.....C.....A.....A.....G.T..... : 1000

AY526219.1|PUUV|N|Sweden|Human|Umea/hu| :C.....T.T.T.....G.....T.....A.....T.....T.....T.....C.....A.....T..... : 1000

AJ223380.1|PUUV|N|Sweden|M.g.|Tavelsjo/Cg81/94| :T.....T.....A.....C.....A.....T.....A.T.....A.T.....C.....A.....A.....T..... : 1000

U14137.1|PUUV|N|Bosnia-H.|M.g.|Vranica| :T.....T.....A.....C.....A.....T.....A.T.....A.T.....C.....A.....A.....T..... : 1000

AJ223371.1|PUUV|N|Sweden|M.g.|Huggberget/Cg36/94| :C.....T.....T.....A.....T.....A.....T.....A.T.....A.T.....C.....A.....A.....T..... : 1000

Z48586.1|PUUV|N|Sweden|M.g.|Vindeln/L20Cg/83| : ..C.C.....T.....A.....T.....A.....T.....A.T.....A.T.....A.....A.....T..... : 1000

AJ223374.1|PUUV|N|Sweden|M.g.|Mellansel/Cg47/94| :C.....T.T.T.....A.....T.....A.....T.T.....A.T.....A.....C.....A.....A.....TA... : 1000

AJ223375.1|PUUV|N|Sweden|M.g.|Mellansel/Cg49/94| :C.....T.T.T.....A.....T.....A.....T.....A.T.....A.....C.....A.....A.....T..... : 1000

AJ238791.1|PUUV|N|Denmark|M.g.|Fyn/19| :A.....T.....A.....A.....T.A.....C.G.T.A.....A.....C.....A.....A.....T..... : 1000

AJ278092.1|PUUV|N|Denmark|M.g.|Fyn47| :A.....T.....A.....A.....C.AC.TA.....A.....C.....A.....A.....G.T..... : 1000

AJ278093.1|PUUV|N|Denmark|M.g.|Fyn131| :A.....T.....A.....GA.....A.....C.AC.TA.....A.....C.....A.....A.....G.T..... : 1000

AJ223368.1|PUUV|N|Norway|M.g.|Eidsvoll/1124v| : ..C.G.....GT.A.A.....A.....T.....C.....T.T.....A.....T.....T.....C.....T.A.....T..... : 1000

AJ223369.1|PUUV|N|Norway|M.g.|Eidsvoll/Cg1138/87| : ..C.G.....GT.T.A.....A.....T.....C.....T.T.....A.....T.....T.....C.....A.....A.....T..... : 1000

JN657228.1|PUUV|N|Latvia|M.g.|Jelgava/Mg149/2008| :C.....GT.....T.....A.....A.....A.....T.A.T.G.A.....C.A.....A.....T..... : 1000

KX757839.1|PUUV|N|Lithuania|M.g.|LT15/164|2015| : ..C.C.A.GT.T.T.....A.....A.....A.....C.T.....A.....A.....C.A.....A.....A.GT..... : 1000

KX757840.1|PUUV|N|Lithuania|M.g.|LT15/174|2015| : ..C.C.A..T.T.T.....G.A.....A.....A.....C.T.....A.....A.....C.A.....A.....A.GT..... : 1000

KX815394.1|PUUV|N|Poland|M.g.|KS13/855|2009| : ..C.C.....GT.T.T.....A.....A.....A.....T.....A.....A.....C.A.....A.....A..... : 1000

KX757841.1|PUUV|N|Lithuania|M.g.|LT15/201|2015| : ..C.C.A.GT.T.T.....A.....A.....A.....C.T.....A.....A.....C.A.....A.....A.GT..... : 1000

AJ314598.1|PUUV|N|Russia|M.g.|Baltic/49Cg/00| : ..G.C.A.GT.T.C.C.....A.....A.....C.....A.....A.T.T.A.....C.....A.....A.GT.G..... : 1000

AJ314599.1|PUUV|N|Russia|M.g.|Baltic/205Cg/00| : ..G.C.A.GT.T.T.....G.....A.....A.....A.T.A.T.T.A.....A.....A.G.G.C. : 1000

JN657229.1|PUUV|N|Latvia|M.g.|Madona/Mg99/2008| : ..G.C.A..T.T.T.....A.....C.....A.T.....T.....A.....C.....A.....A.GT..... : 1000

JN657232.1|PUUV|N|Latvia|M.g.|Madona/Mg233/2008| : ..G.C.A..T.T.T.....A.....C.....A.T.....T.....A.....C.....A.....A.GT..... : 1000

JN657230.1|PUUV|N|Latvia|M.g.|Jelgava/Mg136/2008| : ..G.C.A..T.T.T.....A.....C.....A.T.....T.A.....T.A.....C.....A.....A.G.G..... : 1000

JN657231.1|PUUV|N|Latvia|M.g.|Jelgava/Mg140/2008| : ..G.C.A..T.T.T.....A.....C.....A.T.....T.A.....C.....A.....A.G.G..... : 1000

Z30707.1|PUUV|N|Russia|M.g.|Udmurtia/458Cg/88| : ..G.C.....T.....T.....G.....A.....C.....A.T.....T.C.T.....C.....T.....T.G..... : 1000

Z30706.1|PUUV|N|Russia|M.g.|Udmurtia/444Cg/88| : ..G.C.....T.....T.....G.....A.....C.....A.T.....T.C.T.....C.....T.....T.G..... : 1000

Z84204.1|PUUV|N|Russia|M.g.|Kazan| : ..G.C.....T.....T.....G.....A.....C.....A.T.....T.C.T.....C.....T.....T.G..... : 1000

Z30708.1|PUUV|N|Russia|M.g.|Udmurtia/338Cg/92| : ..G.C.....T.....T.....G.....A.....C.....A.T.....T.C.T.....C.....T.....T.G..... : 1000

Z21497.1|PUUV|N|Russia|M.g.|Udmurtia/894Cg/91| : ..G.C.....T.....T.....G.....A.....C.....A.T.....T.C.T.....C.....TT.....T.G..... : 1000

AB433843.2|PUUV|N|Russia|M.g.|Samara_49/Cg/2005| : ..G.C.C..C..T.....T.....A.....A.....C.....A.T.....T.C.A.....C.....T.....T.C. : 1000

AB433845.2|PUUV|N|Russia|M.g.|Samara_94/Cg/2005| : ..G.C.C..C..T.....T.....A.....A.....C.....A.T.....T.C.A.....C.....T.....GT..... : 1000

L11347.1|PUUV|N|Russia|Human|P360| : ..G.C.C..C..T.T.T.....A.....A.....A.....A.T.....C.A.....A.....T.....T..... : 1000

AB297665.2|PUUV|N|Russia|M.g.|DTK/Ufa-97|1997| : ..G.C.C..C..T.T.T.....A.....A.....A.....A.T.....C.A.....A.....T.....T..... : 1000

M32750.1|PUUV|N|Russia|M.g.|CG1820| : ..G.C.C..C..T.T.T.....A.....A.....A.....A.T.....C.A.....A.....T.....T..... : 1000

AF442613.1|PUUV|N|Russia|M.g.|CG17/Baskiria-2001| : ..G.C.C..C..T.T.T.....A.....A.....A.....A.T.....C.A.....A.....T.....T..... : 1000

KX815395.1|PUUV|N|Poland|M.g.|KS14/118|2009| : ..G.C.A.GT.....T.....T.....A.....A.....A.....T.C.....C.A.....C.....A.GT..... : 1000

GQ339483.1|PUUV|N|Sweden|M.g.|Bergsjobo/Mg25/05| :A.GT.T.A.....A.....T.....C.....T.A.T.A.T.G.T.....C.....T.....A.G.T..... : 1000

AJ223377.1|PUUV|N|Sweden|M.g.|Solleftea/Cg6/95| :A.GT.T.A.....A.....T.C.C.....T.A.T.A.T.G.T.....T.....A.G.T..... : 1000

GQ339484.1|PUUV|N|Sweden|M.g.|Faboviken/Mg26/05| : ..C.....A.GT.T.A.....G.A.....C.....T.A.T.A.T.....T.....C.....A.G.T..... : 1000

GQ339485.1|PUUV|N|Sweden|M.g.|Mangelbo/Mg1/05| : ..C.....GT.T.A.....A.....C.....T.A.T.A.T.....T.....C.....T.....A.GT..... : 1000

GQ339486.1|PUUV|N|Sweden|M.g.|Munga/Mg2/05| : ..C.....GT.T.A.....A.....C.....T.A.T.A.T.....T.....C.....T.....A.GT..... : 1000

GQ339487.1|PUUV|N|Sweden|M.g.|Munga/Mg16/05| : ..C.....GT.T.A.....A.....A.....T.A.T.A.T.....T.....C.....T.....A.GT..... : 1000

AJ223376.1|PUUV|N|Sweden|M.g.|Solleftea/Cg3/95| :C.A.GT.T.A.....G.A.....C.....T.A.T.A.T.....T.....C.....A.G.T..... : 1000

AF367071.1|PUUV|N|Russia|M.r.|CRF366| : ..C.....CT.T.T.....A.T.A.....A.....C.....T.A.T.A.....C.A.....C.....A.G.T..... : 1000

AF367064.1|PUUV|N|Russia|M.g.|CG144| : ..C.....CT.T.T.....T.A.....A.....C.....T.A.T.A.....C.A.....C.....A.G.T..... : 1000

AF367065.1|PUUV|N|Russia|M.g.|CG168| : ..C.....CT.T.T.....T.A.....A.....C.....T.A.T.A.....C.A.....C.....A.G.T..... : 1000

AF367068.1|PUUV|N|Russia|M.g.|CG315| : ..C.....CT.T.T.....T.A.....A.....C.....T.A.T.A.....C.A.....C.....A.G.T..... : 1000

AF367069.1|PUUV|N|Russia|M.r.|CRF161| : ..C.....CT.T.T.....T.A.....A.....C.....T.A.T.A.....C.A.....C.....G.A.....G.T..... : 1000

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*          920          *          940          *          960          *          980          *          1000
2014.00598|PUUV|N|France|H.s.|59|FOURMIES| : GATAATATTGAAGCCCCGAATGCACCCTGGGTGTTTGTCTGTGCACCCGACCCGGTGCCACCCAGACATGTATTTATGTTGCAGGGATGGCTGAACTAGGTG : 1000
AF367070.1|PUUV|N|Russia|M.r.|CRF308| : ..C.....CT.T..T....T..A....A....C....T..A..T..A....C..A....C.....A.....G..T.... : 1000
AF367066.1|PUUV|N|Russia|M.g.|CG215| : ..C.....CT.T..T....T..A....A....C....T..A..T..A....C..A....C.....A.....G..T.... : 1000
AF367067.1|PUUV|N|Russia|M.g.|CG222| : ..C.....CT.T..T....T..A....A....C....T..A..T..A....C..A....C.....A.....G..T.... : 1000
Z46942.1|PUUV|N|Finland|M.g.|Puumala/1324Cg/79| : ..C..C....TT...T....T....A....A....A....A....T..A..T....A.....G..T....G... : 1000
Z30702.1|PUUV|N|Finland|M.g.|Evo/12Cg/93| : .....C....TT.T..T....G..A....T....A....A....A..T....A.....C.....A.....G..T....G... : 1000
Z30703.1|PUUV|N|Finland|M.g.|Evo/13Cg/93| : .....C....TT.T..T....G..A....T....A....A....A..T....A.....C.....A.....G..T....G... : 1000
Z30704.1|PUUV|N|Finland|M.g.|Evo/14Cg/93| : .....C....TT.T..T....G..A....T....A....G..A....A..T....A.....C.....A.....G..T....G... : 1000
Z30705.1|PUUV|N|Finland|M.g.|Evo/15Cg/93| : .....C....TT.T..T....G..A....T....A....G..A....A..T....A.....C.....A.....G..T....G... : 1000
Z69985.1|PUUV|N|Finland|M.g.|Virrat/25Cg/95| : .....C..C..CT.T..T....A....C....A....A....A....T....A.....C.....A.....G..T....G... : 1000
JN831947.1|PUUV|N|Finland|Pieksamaki/human_lung/20| : .....C....TT...T....A....A....A....A....A..T....A.....C.....A.....G..T....G... : 1000
JN831943.1|PUUV|N|Finland|Pieksamaki/Mg7/2008| : .....C....TT...T....A....A....A....A....A..T....A.....C.....A.....G..T....G... : 1000
JN831950.1|PUUV|N|Finland|Pieksamaki/human_kidney/| : .....C....TT...T....A....A....A....A....A..T....A.....C.....A.....G..T....G... : 1000
JQ319166.1|PUUV|N|Finland|Konnesvesi/Mg_O14B/2005| : ..C..C....TT...T....G..A....A....A....A....A..T....A.....G..T....G... : 1000
JQ319169.1|PUUV|N|Finland|Konnesvesi/Mg_O27B/2005| : ..C..C....TT...T....G..A....A....A....A....A..T....A.....G..T....G... : 1000
JQ319167.1|PUUV|N|Finland|Konnesvesi/Mg_O15B/2005| : ..C..C....TT...T....G..A....A....A....A....A..T....A.....G..T....G... : 1000
JQ319164.1|PUUV|N|Finland|Konnesvesi/Mg_O6B/2005| : ..C..C....TT...T....G..A....A....A....A....A..T....A.....G..T....G... : 1000
JQ319165.1|PUUV|N|Finland|Konnesvesi/Mg_O9B/2005| : ..C..C....TT...T....G..A....A....A....A....A..T....A.....G..T....G... : 1000
JQ319170.1|PUUV|N|Finland|Konnesvesi/Mg_O74B/2005| : ..C..C....TT...T....G..A....A....A....A....A..T....A.....G..T....G... : 1000
JQ319171.1|PUUV|N|Finland|Konnesvesi/Mg_M114B/2005| : ..C..C....TT...T....A....A....A....A....A..T....A.....G..T....G... : 1000
AJ238788.1|PUUV|N|Russia|M.g.|Karhumaki| : .....C....CT.A..C.....A....C....A....A....A..T..A..T....G..A.....C.....A....A..G..T....G... : 1000
AJ238789.1|PUUV|N|Russia|M.g.|Kolodozero| : .....C....CT.A..C.....A....C....A....A....A..T..A..T....G..A.....C.....A....A..G..T....G... : 1000
AJ314597.1|PUUV|N|Finland|M.g.|Pallasjarvi/63Cg/98| : .....C....CT.T..T....T....C....A....A....A..T....A.....C.....G..G..T....G... : 1000
NC_005224.1|PUUV|N|Finland|M.g.|Sotkamo-revu-NCBI2| : ..C..C....TT.G..T....A....C....A....A....A..T....A.....C.....A....A..G..T....G... : 1000
AJ238790.1|PUUV|N|Russia|M.g.|Gomselga| : ..C..C....CT.T..T....A....C....C....C....A..T....T....A.....C.....A....A..G..C..G... : 1000
AB010731.1|Hokkaido-V|N|Japan|M.r.|Tobetsu-60Cr-93| : ..C.....CT...A....C..A....A....A....C..T..TA.....A.....C.....A....A..GT....A... : 1000
AB010730.1|Hokkaido-V|N|Japan|M.r.|Kamiiso-8Cr-95| : ..C.....CT...A....C..A....A....A....C..T..TA.....A.....C.....A....A..G....G... : 1000
JX046487.1|Muju-V|N|South-Korea|M.r.|11-5|2011| : ..C..C....AT..A....A....A....T.G....T..T..TA.A.....T....CC.....G.....A....T.... : 1000
JX046484.1|Muju-V|N|South-Korea|M.r.|11-4|2011| : ..C..C....AT..A....A....A....T.G....T..T..TA.A.....T....CC.....G.....A....T.... : 1000
JX028273.1|Muju-V|N|South-Korea|M.r.|11-1|2011| : ..C..C....AT..A....A....A....CT.G....T..T..TA.A.....T....C.....G.....A....G..T.... : 1000
DQ138128.1|Muju-V|N|South-Korea|E.r.|00-18| : ..C....A..G.AT..T....A....A..CT.C....T..A..TA...T....T....C.C.....T..A....C..T.... : 1000
DQ138140.1|Muju-V|N|South-Korea|E.r.|99-27| : ..C....A..G.AT..T....A....A..CT.C....T..A..TA...T....T....C.C.....T..A....C..T.... : 1000
DQ138133.1|Muju-V|N|South-Korea|E.r.|96-1| : ..C....A..G..T..T....A....A..CT.C....T..A..TA...T..G..T....C.C.....C..T.... : 1000
DQ138142.1|Muju-V|N|South-Korea|E.r.|99-28| : ..C....A..G.AT..T....A....A..CT.C....T..A..TA...T....T....C.C.....T..A....C..T.... : 1000

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						*	1020	*	1040	*	1060	*	1080	*	1100
2014.00598	PUUV	N	France	H.s.	59	FOURMIES	:	CATTCTTTTCCATATTACAGGATATGAGAAATACCATTATGGCATCTAAACTGTTGGAACAGCAGAAGAAAAGTTAAAAAGAAATCATCATTTTATCA	:	1100					
2015.00657	PUUV	N	France	H.s.	|02	CILLY	:	.....C.....A.....G.....	:	1100				
2015.00526	PUUV	N	France	H.s.	|08	MONTHERME	:	.....C.....	:	1100				
2015.00045	PUUV	N	France	H.s.	|59	FOURMIES	:	.....T.....C.....A.....G.....	:	1100				
2015.00430	PUUV	N	France	H.s.	|02	MONTCORNET	:	.....C.....	:	1100				
2016.00311	PUUV	N	France	H.s.	|02	LAON	:	.....C.....	:	1100				
AJ277031.1	PUUV	N	Belgium	M.g.	|Montbliart/23Cg/96		:	.....T.....C.....	:	1100				
2016.00326	PUUV	N	France	H.s.	|02	LAON	:	.....C.....	:	1100				
2016.00353	PUUV	N	France	H.s.	|02	CESSIERES	:	.....C.....	:	1100				
2012.00061	PUUV	N	France	H.s.	|02	LANISCOURT	:	.....C.....	:	1100				
2014.00174	PUUV	N	France	H.s.	|02	ST-ERME-OUTRE-ET-	:	.....C.....	:	1100				
2016.00268	PUUV	N	France	H.s.	|02	PRESLES-ET-THIERN	:	.....C.....	:	1100				
2015.00660	PUUV	N	France	H.s.	|02	VIC-SUR-AISNE	:	.....T.....T.....C.....	:	1100				
2012.00025	PUUV	N	France	H.s.	|51	SAINTE-MENEHOULD	:	.....A.....G.....C.....G.....C.....	:	1100				
2015.00665	PUUV	N	France	H.s.	|51	REIMS	:	.....T.....A.....G.....C.....C.....C.....G.....G.....G.....G.....	:	1100				
2012.00307	PUUV	N	France	H.s.	|54	COLOMBEY-LES-BELL	:	.....T.....C.....G.....C.....C.....G.....g.....C.....C.....	:	1100				
2012.00123	PUUV	N	France	H.s.	|55	BAR-LE-DUC	:	.....T.....A.....G.....C.....C.....G.....G.....G.....G.....C.....C.....	:	1100				
2012.00278	PUUV	N	France	H.s.	|51	REIMS	:	.....T.....A.....G.....C.....C.....G.....G.....G.....C.....	:	1100				
2015.00185	PUUV	N	France	H.s.	|68	FELLERING	:	.....T.....A.....C.....G.....C.....C.....G.....G.....G.....G.....C.....	:	1100				
KJ994776.1	PUUV	N	Germany	M.g.	|Mu/07/1219|2007		:	.....T.....G.....C.....T.....G.....G.....A.....	:	1100				
2012.00086	PUUV	N	France	H.s.	|58	CHEVROCHES	:	.....T.....C.....T.....C.....G.....T.....C.....g.....C.....C.....	:	1100				
KT247595.1	PUUV	N	France	M.g.	|45	Orleans/Mg29/2010	:	.....T.....C.....T.....C.....G.....T.....C.....A.....C.....G.....A.....	:	1100				
KT247594.1	PUUV	N	France	M.g.	|45	Orleans/Mg23/2010	:	.....T.....T.....C.....G.....T.....C.....A.....C.....A.....	:	1100				
KY365004.1	PUUV	N	France	M.g.	|45	Orleans/NCHA373/2	:	.....T.....C.....T.....C.....G.....T.....C.....A.....C.....A.....	:	1100				
2012.00301	PUUV	N	France	H.s.	|25	MOUTHE	:	.....T.....T.....G.....C.....G.....C.....C.....T.....A.....G.....G.....C.....	:	1100				
AM695638.1	PUUV	N	France	M.g.	|Mignovillard/CgY02/2		:	.....T.....T.....G.....C.....G.....C.....C.....T.....A.....G.....G.....C.....	:	1100				
KT247597.1	PUUV	N	France	M.g.	|39	Jura/Mg214/2010	:	.....T.....T.....G.....C.....G.....C.....C.....T.....A.....G.....G.....C.....	:	1100				
KT247596.2	PUUV	N	France	M.g.	|39	Jura/Mg2/2010	:	.....T.....T.....C.....G.....C.....C.....T.....A.....G.....G.....C.....	:	1100				
2012.00102	PUUV	N	France	H.s.	|39	COISERETTE	:	.....T.....T.....C.....G.....C.....C.....T.....A.....G.....G.....C.....	:	1100				
2012.00536	PUUV	N	France	H.s.	|39	LA-PESSE	:	.....T.....T.....C.....G.....C.....C.....T.....A.....G.....G.....C.....	:	1100				
2014.00622	PUUV	N	France	H.s.	|39	ARBOIS	:	.....T.....T.....G.....C.....G.....C.....C.....T.....A.....G.....G.....C.....	:	1100				
2015.00567	PUUV	N	France	H.s.	|70	RIOZ	:	.....T.....T.....G.....C.....C.....C.....T.....G.....A.....GG.....G.....C.....	:	1100				
2014.00637	PUUV	N	France	H.s.	|25	SAULES	:	.....T.....T.....G.....C.....G.....G.....C.....T.....G.....GG.....G.....C.....	:	1100				
2012.00396	PUUV	N	France	H.s.	|39	SAINT-CLAUDE	:	.....T.....T.....G.....C.....G.....C.....C.....T.....A.....G.....G.....C.....	:	1100				
2014.00120	PUUV	N	France	H.s.	|38	LE-MOUTARET	:	.....T.....T.....G.....C.....G.....C.....C.....T.....A.....G.....G.....C.....	:	1100				
2015.00153	PUUV	N	France	H.s.	|73	GREZY-SUR-ISERE	:	.....T.....T.....G.....C.....G.....C.....C.....T.....A.....G.....G.....C.....	:	1100				
2015.00504	PUUV	N	France	H.s.	|70	RONCHAMP	:	.....T.....C.....T.....G.....C.....G.....C.....G.....C.....T.....A.....G.....G.....C.....	:	1100				
2016.00275	PUUV	N	France	H.s.	|21	JALLANGES	:	.....T.....C.....T.....G.....C.....G.....C.....C.....T.....AA.....G.....G.....C.....	:	1100				
2016.00320	PUUV	N	France	H.s.	|25	SAINT-VIT	:	.....T.....T.....G.....C.....G.....C.....C.....T.....G.....A.....G.....G.....C.....	:	1100				
2015.00410	PUUV	N	France	H.s.	|70	ANGIREY	:	.....T.....C.....T.....G.....C.....G.....C.....C.....T.....A.....G.....G.....C.....	:	1100				
DQ016430.2	PUUV	N	Germany	M.g.	|Bavaria/CG33/04		:	.....T.....T.....G.....G.....T.....C.....C.....T.....G.....AC.....G.....G.....	:	1097				
DQ016432.2	PUUV	N	Germany	M.g.	|Bavaria/CG41/04		:	.....C.....T.....C.....G.....G.....T.....C.....C.....T.....G.....AC.....G.....G.....	:	1100				
AY954723.2	PUUV	N	Germany	M.g.	|Bavaria-CG34/04		:	.....C.....T.....C.....G.....G.....T.....C.....C.....T.....G.....C.....G.....G.....	:	1100				
AY954722.2	PUUV	N	Germany	M.g.	|Bavaria-CG9/04		:	.....T.....T.....C.....G.....C.....T.....C.....T.....C.....C.....T.....G.....AC.....G.....G.....	:	1100				
2012.00402	PUUV	N	France	H.s.	|60	GOUVIEUX	:	.....T.....T.....C.....G.....C.....C.....C.....G.....C.....T.....A.....G.....G.....C.....	:	1100				
2014.00540	PUUV	N	France	H.s.	|60	CHAMBLY	:	.....T.....T.....C.....G.....C.....A.....G.....C.....T.....A.....G.....G.....C.....C.....	:	1100				
AJ314600.1	PUUV	N	Balkan	M.g.	|Balkan-1		:	.....C.....T.....A.....CC.....T.....A.....T.....A.....C.....G.....G.....C.....T.....AC.....G.....G.....C.....	:	1100				
AJ314601.1	PUUV	N	Balkan	M.g.	|Balkan-2		:	.....C.....T.....A.....CC.....T.....A.....T.....A.....C.....G.....A.....C.....T.....A.....G.....G.....C.....	:	1100				
FN377821.1	PUUV	N	Hungary	M.g.	|Mg9/HungaryTR17/00		:	.....C.....T.....A.....CC.....T.....A.....T.....A.....C.....G.....G.....C.....T.....AC.....G.....G.....C.....	:	1100				
FN377822.1	PUUV	N	Hungary	M.g.	|Mg23/HungaryTR17/00		:	.....C.....T.....A.....CC.....T.....A.....T.....A.....C.....G.....G.....C.....T.....A.....G.....G.....C.....	:	1100				
GQ339473.1	PUUV	N	Sweden	M.g.	|Kiviniemi/Mg3/05		:	.....C.....C.....G.....T.....G.....G.....C.....T.....A.....C.....A.....G.....C.....G.....G.....G.....A.....T.....C.....	:	1100				
GQ339474.1	PUUV	N	Sweden	M.g.	|Kiviniemi/Mg5/05		:	.....G.....T.....G.....G.....C.....T.....A.....C.....A.....G.....C.....G.....G.....C.....G.....A.....T.....C.....	:	1100				
GQ339475.1	PUUV	N	Sweden	M.g.	|Kiviniemi/Mg6/05		:	.....G.....T.....G.....G.....C.....T.....A.....C.....A.....G.....C.....G.....G.....C.....G.....A.....T.....C.....	:	1100				
GQ339476.1	PUUV	N	Sweden	M.g.	|Aijajarvi/Mg7/05		:	.....G.....T.....G.....G.....C.....T.....A.....C.....A.....G.....C.....G.....G.....C.....G.....A.....T.....C.....	:	1100				

	*	1020	*	1040	*	1060	*	1080	*	1100
2014.00598|PUUV|N|France|H.s.|59|FOURMIÉS|	:	CATTCTTTTCCATATTACAGGATATGAGAAATACCATTATGGCATCTAAAACGTGGAACAGCAGAGAAAGTTAAAAAGAAATCATCATTTTATCA	:		:		:		:	1100
GQ339477.1|PUUV|N|Sweden|M.g.|Aijajarvi/Mg9/05|	:	.....C.G.T.G.....G.C.T.A....C.A.G.....C.G.....G..C...G.A....T....C.....	:		:		:		:	1100
GQ339478.1|PUUV|N|Sweden|M.g.|Jockfall/Mg12/05|	:	.....T.T.G.....G.C.T.A....C.A.G.....C.C.....T.....G.AC.T.G.A....T.....C.....	:		:		:		:	1100
GQ339482.1|PUUV|N|Sweden|M.g.|Kalvudden/Mg27/05|	:	.....C.A.T.G.....G.C.T.A....C.A.G.....C.T.T.....G..C.T.G.A....T....C.....	:		:		:		:	1100
GQ339479.1|PUUV|N|Sweden|M.g.|Moskosel/Mg17/05|	:	....T....G..TC.G.....C....A....C.A.G.....C.....T....G..C.T.G.A....T.....C.....	:		:		:		:	1100
GQ339481.1|PUUV|N|Sweden|M.g.|Ljustask/Mg20/05|	:	....T..C.A.T.G.....C....A....C.A.G.....C.....T....G..C.T.G.A....T.....C.....	:		:		:		:	1100
GQ339480.1|PUUV|N|Sweden|M.g.|Gyttjea/Mg19/05|	:	....T..C.G..TC.G.....C....A....C.A.G.....C.....T....G..C.T.G.A....T.....C.....	:		:		:		:	1100
AY526219.1|PUUV|N|Sweden|Human|Umea/hu|	:	.C.T....A.TC.G.A.C.....G.....A....C.A.G.C.A.C.....T.....AC.C.G.A....T....C.C....	:		:		:		:	1100
AJ223380.1|PUUV|N|Sweden|M.g.|Tavelsjo/Cg81/94|	:	....T....A..CC.G.....T..A....C.A.G.C.G.C.....T.....C.T.G.A....T....C.....	:		:		:		:	1100
U14137.1|PUUV|N|Bosnia-H.|M.g.|Vranica|	:	....T....A..CC.G.....T..A....C.A.G.C.G.C.....T.....C.T.G.A....T....C.....	:		:		:		:	1100
AJ223371.1|PUUV|N|Sweden|M.g.|Huggberget/Cg36/94|	:	....T....A..CC.G.....T..A....C.A.G.C.A.C.C.....T.....G..C.T.G.A.G.T....C.....	:		:		:		:	1100
Z48586.1|PUUV|N|Sweden|M.g.|Vindeln/L20Cg/83|	:	....T....A..CC.G.....C.T.A....A.G.....G.C.....T.....G..C.T.G.A....T....C.C....	:		:		:		:	1100
AJ223374.1|PUUV|N|Sweden|M.g.|Mellansel/Cg47/94|	:	.T.T..C.A.TC.G.A.C.....G.....A....C.A.G.C.A.C.....T.....AC.T.G.A....T....C.....	:		:		:		:	1100
AJ223375.1|PUUV|N|Sweden|M.g.|Mellansel/Cg49/94|	:	.T.T..C.A.TC.G.A.C.....G.....A....C.A.G.C.A.C.....T.....AC.T.G.A....T....C.....	:		:		:		:	1100
AJ238791.1|PUUV|N|Denmark|M.g.|Fyn/19|	:	.C.T..C.....C....A.....G.....T..C.....A.C.....C.....G.A.....T....C.....	:		:		:		:	1100
AJ278092.1|PUUV|N|Denmark|M.g.|Fyn47|	:	.C.T..C.....C....A.....G.G.T.C.....A.C.....C.....G.G.A....G..C.C....	:		:		:		:	1100
AJ278093.1|PUUV|N|Denmark|M.g.|Fyn131|	:	.C.T..C.....C....A.....G.....T..C.....A.C.....C.....G.G.A....G..C.C....	:		:		:		:	1100
AJ223368.1|PUUV|N|Norway|M.g.|Eidsvoll/1124v|	:	.C.....A..T.....G.....G.A....A.G.A.G.C.....G.A....G.A....T..C.C....	:		:		:		:	1100
AJ223369.1|PUUV|N|Norway|M.g.|Eidsvoll/Cg1138/87|	:	.C.....A..T.....G.....G.A....A.G.A.G.C.....G.A....G.A....T..C.C....	:		:		:		:	1100
JN657228.1|PUUV|N|Latvia|M.g.|Jelgava/Mg149/2008|	:	.C.T....A.TC.....C.....A.....C.....T.....G.....G.A....C.T.C....	:		:		:		:	1100
KX757839.1|PUUV|N|Lithuania|M.g.|LT15/164|2015|	:	....T....A..CC...A.....G.....A.....T.....T.....A.G.G.A....C.....C....	:		:		:		:	1100
KX757840.1|PUUV|N|Lithuania|M.g.|LT15/174|2015|	:	....T....A..C....A.....G.....A.....T.....T.....A.G.G.A....C.....C....	:		:		:		:	1100
KX815394.1|PUUV|N|Poland|M.g.|KS13/855|2009|	:	.C.T....A..CC.....C.....A.....G.....C.....T.....G.A.G.G.....C.C.....	:		:		:		:	1100
KX757841.1|PUUV|N|Lithuania|M.g.|LT15/201|2015|	:	....T....A..CC.....A.....G.....A.....T.....T.....A.G.G.A....C.....C....	:		:		:		:	1100
AJ314598.1|PUUV|N|Russia|M.g.|Baltic/49Cg/00|	:	....T..C.T.T.G.....C.....G...A.....T.....G.AC.G.G.A....C.....C.C....	:		:		:		:	1100
AJ314599.1|PUUV|N|Russia|M.g.|Baltic/205Cg/00|	:	....T..C.T.T.G.....G.G.....C.....G...A.....C.....G.A.G.G.A....C.....C.C....	:		:		:		:	1100
JN657229.1|PUUV|N|Latvia|M.g.|Madona/Mg99/2008|	:	....T..C.T.T.G.....C.....C.C.G...A.....T.....G.AC.G.G.A....C.....C.C....	:		:		:		:	1100
JN657232.1|PUUV|N|Latvia|M.g.|Madona/Mg233/2008|	:	....T..C.T.T.G.....C.....C.C.G...A.....T.....G.AC.G.G.A....C.....C.C....	:		:		:		:	1100
JN657230.1|PUUV|N|Latvia|M.g.|Jelgava/Mg136/2008|	:	....T..C.T.T.G.....C.....C.....T.....G.AC.G.G.A....C.....C.C....	:		:		:		:	1100
JN657231.1|PUUV|N|Latvia|M.g.|Jelgava/Mg140/2008|	:	....T..C.T.T.G.....C.....G...A.....T.....G.AC.G.G.A....C.....C.C....	:		:		:		:	1100
Z30707.1|PUUV|N|Russia|M.g.|Udmurtia/458Cg/88|	:	.....G..CC.....G.C.T.....A.T.....A.....G.C.C.C....	:		:		:		:	1100
Z30706.1|PUUV|N|Russia|M.g.|Udmurtia/444Cg/88|	:	.....G..CC.....G.C.T.....C.A.T.....A.....G.C.C.C....	:		:		:		:	1100
Z84204.1|PUUV|N|Russia|M.g.|Kazan|	:	.....G..CC.....G.C.T.....A.T.....A.....G.C.C.C....	:		:		:		:	1100
Z30708.1|PUUV|N|Russia|M.g.|Udmurtia/338Cg/92|	:	.....G..CC.....G.C.T.....A.T.....A.....G.C.C.C....	:		:		:		:	1100
Z21497.1|PUUV|N|Russia|M.g.|Udmurtia/894Cg/91|	:	.....G..CC.....G.C.T.....A.T.....A.....G.C.C.C....	:		:		:		:	1100
AB433843.2|PUUV|N|Russia|M.g.|Samara_49/CG/2005|	:	....T....T..CC...A.....G.C.T.....G.....A.C.....A....G.....T..C.C....	:		:		:		:	1100
AB433845.2|PUUV|N|Russia|M.g.|Samara_94/CG/2005|	:	....T....T..TC...G.C....C.....C.A.C.....A....G.A....C..C.C....	:		:		:		:	1100
L11347.1|PUUV|N|Russia|Human|P360|	:	.....C.....G.C.....G.C.....G.AC.G.....G.C.C.C....	:		:		:		:	1100
AB297665.2|PUUV|N|Russia|M.g.|DTK/Ufa-97|1997|	:	.....C.....G.C.....G.C.....G.AC.G.....G.C.C.C....	:		:		:		:	1100
M32750.1|PUUV|N|Russia|M.g.|CG1820|	:	.....C.....G.C.....G.C.....G.AC.G.....G.C.C.C....	:		:		:		:	1100
AF442613.1|PUUV|N|Russia|M.g.|CG17/Baskiria-2001|	:	.....C.....G.C.T.....G.C.....G.C.....G.AC.G.....G.C.C.C....	:		:		:		:	1100
KX815395.1|PUUV|N|Poland|M.g.|KS14/118|2009|	:	.G.T....T.TC.G.....C.....G.....G.....G.G.A....G.....T..C.C....	:		:		:		:	1100
GQ339483.1|PUUV|N|Sweden|M.g.|Bergsjobo/Mg25/05|	:	.C.....A.C.G.....G.....A.A.....G.....A.....G.....C.G.A....C....C....	:		:		:		:	1100
AJ223377.1|PUUV|N|Sweden|M.g.|Solleftea/Cg6/95|	:	.C.....A.C.G.....G.....A.A.....G.....A.....T.....C.G.A....C....C....	:		:		:		:	1100
GQ339484.1|PUUV|N|Sweden|M.g.|Faboviken/Mg26/05|	:	.C.T....A.C.G.....G.....A.A.....G.....A.....T.....G.A....T....C....	:		:		:		:	1100
GQ339485.1|PUUV|N|Sweden|M.g.|Mangelbo/Mg1/05|	:	.C.....C.A.CC...A.....A.C.....G.T.....G.G.....G.A....C.....C.C....	:		:		:		:	1100
GQ339486.1|PUUV|N|Sweden|M.g.|Munga/Mg2/05|	:	.C.....C.A.CC...A.....A.C.....G.T.....G.G.....G.A....C.....C.C....	:		:		:		:	1100
GQ339487.1|PUUV|N|Sweden|M.g.|Munga/Mg16/05|	:	.C.....C.A.CC...A.....A.C.....G.T.....G.G.....G.A....C.....C.C....	:		:		:		:	1100
AJ223376.1|PUUV|N|Sweden|M.g.|Solleftea/Cg3/95|	:	.C.....A.C.G.....A.A.....G.C.A.....C.T.....G.A....T....C....	:		:		:		:	1100
AF367071.1|PUUV|N|Russia|M.r.|CRF366|	:	.T.....A..C.T.....C....A.....A.G.....G.....C.G.....C.C.C....	:		:		:		:	1100
AF367064.1|PUUV|N|Russia|M.g.|CG144|	:	.T.....A..C.T.....C....A.....A.G.....G.....C.G.....C.C.C....	:		:		:		:	1100
AF367065.1|PUUV|N|Russia|M.g.|CG168|	:	.T.....A..C.T.....C....A.....A.G.....G.....C.G.....C.C.C....	:		:		:		:	1100
AF367068.1|PUUV|N|Russia|M.g.|CG315|	:	.T.....A..C.T.....C....A.....A.G.....G.....C.G.....C.C.C....	:		:		:		:	1100
AF367069.1|PUUV|N|Russia|M.r.|CRF161|	:	.T.....A..C.T.....C....A.....A.G.....G.....C.G.....C.C.C....	:		:		:		:	1100

	*	1020	*	1040	*	1060	*	1080	*	1100
2014.00598|PUUV|N|France|H.s.|59|FOURMIES|	:	CATTCTTTTCCATATTACAGGATATGAGAAATACCATTATGGCATCTAAAACGTGGAACAGCAGAGAAAGTTAAAAAGAAATCATCATTTTATCA	:		:		:		:	1100
AF367070.1|PUUV|N|Russia|M.r.|CRF308|	:	.T.....A..C.T.....C.....A.....A..G.....G...C...G.....C..C.C.....	:		:		:		:	1100
AF367066.1|PUUV|N|Russia|M.g.|CG215|	:	.T.....A..C.T.....C.....A.....A..G.....G...C...G.....C..C.C.....	:		:		:		:	1100
AF367067.1|PUUV|N|Russia|M.g.|CG222|	:	.T.....A..C.T.....C.....A.....A..G.....G...C...G.....C..C.C.....	:		:		:		:	1100
Z46942.1|PUUV|N|Finland|M.g.|Puumala/1324Cg/79|	:	.C..T....A...C.G....C.....A..A.....G.....C.....A..G..G..A..G..C..T..C..C..	:		:		:		:	1100
Z30702.1|PUUV|N|Finland|M.g.|Evo/12Cg/93|	:	.C..T....A.....A..A.....G.....C.....T....G....G.GG....G..C..T..C..C..	:		:		:		:	1100
Z30703.1|PUUV|N|Finland|M.g.|Evo/13Cg/93|	:	.C..T....A.....A..A.....G.....C.....T....G....G.GG....G..C..T..C..C..	:		:		:		:	1100
Z30704.1|PUUV|N|Finland|M.g.|Evo/14Cg/93|	:	.C..T....A.....A..A.....G.....C.....T....G....G.GG....G..C..T..C..C..	:		:		:		:	1100
Z30705.1|PUUV|N|Finland|M.g.|Evo/15Cg/93|	:	.C..T....A.....A..A.....G.....C.....T....G....G.GG....G..C..C..C..C..	:		:		:		:	1100
Z69985.1|PUUV|N|Finland|M.g.|Virrat/25Cg/95|	:	.C..T....A....G..A.....G..A.....G.....C.....T....G....G..A..G..C..T..C..C..	:		:		:		:	1100
JN831947.1|PUUV|N|Finland|Pieksamaki/human_lung/20|	:	.T..T....A...C.G.....A..A.....G.....G.....C.....T....G....G..A..G..C..T..C..C..	:		:		:		:	1100
JN831943.1|PUUV|N|Finland|Pieksamaki/Mg7/2008|	:	.T..T....A...C.G.....A..A.....G.....G.....C.....T....G....G..A..G..C..T..C..C..	:		:		:		:	1100
JN831950.1|PUUV|N|Finland|Pieksamaki/human_kidney/|	:	.T..T....A...C.G.....A..A.....G.....G.....C.....T....G....G..A..G..C..T..C..C..	:		:		:		:	1100
JQ319166.1|PUUV|N|Finland|Konnesvesi/Mg_O14B/2005|	:	.C..T....A...C.C....C.....A..A.....G.....C.....T..T....G....G..A..G..C..T..C..C..	:		:		:		:	1100
JQ319169.1|PUUV|N|Finland|Konnesvesi/Mg_O27B/2005|	:	.C..T....A...C.C....C.....A..A.....G.....C.....T..T....G....G..A..G..C..T..C..C..	:		:		:		:	1100
JQ319167.1|PUUV|N|Finland|Konnesvesi/Mg_O15B/2005|	:	.C..T....A...C.C....C.....A..A.....G.....C.....T..T....G....G..A..G..C..T..C..C..	:		:		:		:	1100
JQ319164.1|PUUV|N|Finland|Konnesvesi/Mg_O6B/2005|	:	.C..T....A...C.C....C.....A..A.....G.....C.....T..T....G....G..A..G..C..T..C..C..	:		:		:		:	1100
JQ319165.1|PUUV|N|Finland|Konnesvesi/Mg_O9B/2005|	:	.C..T....A...C.C....C.....A..A.....G.....C.....T..T....G....G..A..G..C..T..C..C..	:		:		:		:	1100
JQ319170.1|PUUV|N|Finland|Konnesvesi/Mg_O74B/2005|	:	.T..T....A...C.C....C.....A..A.....G.....C.....T..TT....G....G..A..G..C..T..C..C..	:		:		:		:	1100
JQ319171.1|PUUV|N|Finland|Konnesvesi/Mg_M114B/2005|	:	.C..T....A...C.G....C.....A..A.....G.....C.....T..T....G....G..A..G..C..T..C..C..	:		:		:		:	1100
AJ238788.1|PUUV|N|Russia|M.g.|Karhumaki|	:	.C..T....A....G.....G....A..A.....G.....G.....C.....T..T....G..A....G..A....C..T....C..	:		:		:		:	1100
AJ238789.1|PUUV|N|Russia|M.g.|Kolodozero|	:	.C..T....A....G.....C.....A..A.....C.....C.....T....G....G..G..A....C....C..	:		:		:		:	1100
AJ314597.1|PUUV|N|Finland|M.g.|Pallasjarvi/63Cg/98|	:	.C.....A..T..G....C....G....A..A.....C..G.....C.....T....G....G..A....C..C....C..	:		:		:		:	1100
NC_005224.1|PUUV|N|Finland|M.g.|Sotkamo-revu-NCBI2|	:	.C..T....A....G.....C.....C..A..A.....G.....C.....T....G....G..A....G..A....G..T..C....C..	:		:		:		:	1100
AJ238790.1|PUUV|N|Russia|M.g.|Gomselga|	:	.T..T....A....G.....G....T....C....C..G.....C.....C.....T....G....G..A....G....C..T....C..	:		:		:		:	1100
AB010731.1|Hokkaido-V|N|Japan|M.r.|Tobetsu-60Cr-93|	:	.G.....T..CC.G.....G..C....A.....A..G.....T.....AC.G..G..A.....T..C..C..	:		:		:		:	1100
AB010730.1|Hokkaido-V|N|Japan|M.r.|Kamiiso-8Cr-95|	:	.....CC.G..A.....C....A.....G.....G.....T.....AC..G..A.....T..C..C..	:		:		:		:	1100
JX046487.1|Muju-V|N|South-Korea|M.r.|11-5|2011|	:	.....A..CC.C..A.....C.G....A..C.....A....A..G..C.....T..G..G..AC.T..G..A....G.....	:		:		:		:	1100
JX046484.1|Muju-V|N|South-Korea|M.r.|11-4|2011|	:	.....A..CC.C..A.....C.G....A..C.....A....A..G..C.....T..G..G..AC.T..G..A....G.....	:		:		:		:	1100
JX028273.1|Muju-V|N|South-Korea|M.r.|11-1|2011|	:	.....A..CC.C..A.....C.G....A..C.....A....A..G..C.....T..G..G..AC.T..G..A....G.....	:		:		:		:	1100
DQ138128.1|Muju-V|N|South-Korea|E.r.|00-18|	:	.....C..A..CC.T....C....G....A..A.....C.....A..C..T..T....C.G..G.....G.....	:		:		:		:	1100
DQ138140.1|Muju-V|N|South-Korea|E.r.|99-27|	:	.....C..A..CC.T....C....G....A..A.....C.....A..C..T..T....C.G..G.....G.....	:		:		:		:	1100
DQ138133.1|Muju-V|N|South-Korea|E.r.|96-1|	:	.....C..A..CC.T....C....G....A..A.....C.....A..C..T..T....C.G..G.....G.....	:		:		:		:	1100
DQ138142.1|Muju-V|N|South-Korea|E.r.|99-28|	:	.....C..A..CC.T....C....G....A..A.....C.....A..C..T..T....C.G..G.....G.....	:		:		:		:	1100

						*	1120	*	1140	*	1160	*	1180	*	1200	
2014.00598	PUUV	N	France	H.s.	|59|	FOURMIES	:	ATCATACCTGCGGAGGACTCAATCAATGGGAATACAGCTTGACCAAAGAATTATCTTATTGTATATGCTTGAATGGGCAAGGAAATGGTGGATCATTTT	:	1200						
2014.00233	PUUV	N	France	H.s.	|59|	FOURMIES	:	.....A.....	:	1200					
2014.00097	PUUV	N	France	H.s.	|02|	SAINT-MICHEL	:	.....C.....	:	1200					
2014.00488	PUUV	N	France	H.s.	|08|	SIGNY-LE-PETIT	:	.....C.....	:	1200					
2014.00613	PUUV	N	France	H.s.	|59|	FOURMIES	:	.....C.....	:	1200					
2015.00402	PUUV	N	France	H.s.	|08|	CHARLEVILLE-MEZIE	:	.....A.....	:	1200					
2015.00422	PUUV	N	France	H.s.	|59|	ANOR	:	.....C.....	:	1200					
2015.00488	PUUV	N	France	H.s.	|08|	SEDAN	:	.....A.....	:	1200					
2015.00498	PUUV	N	France	H.s.	|08|	REMILLY-AILLICOUR	:	.....C.....	:	1200					
2016.00295	PUUV	N	France	H.s.	|08|	CORNY-MACHEROMENI	:	.....A.....	:	1200					
2016.00333	PUUV	N	France	H.s.	|59|	FOURMIES	:	.....C.....	:	1200					
2016.00345	PUUV	N	France	H.s.	|59|	FOURMIES	:	.....C.....	:	1200					
2016.00357	PUUV	N	France	H.s.	|02|	HIRSON	:	.....C.....	:	1200					
2016.00427	PUUV	N	France	H.s.	|59|	FOURMIES	:	.....C.....	:	1200					
2016.00469	PUUV	N	France	H.s.	|02|	PREMONTRE	:	.....T.....C.....C.....	:	1200					
AJ277075.1	PUUV	N	Belgium	M.g.	|Montbliart/CG14444|		:	.....C.....A.....	:	1200					
2014.00053	PUUV	N	France	H.s.	|08|	SECHEVAL	:	.....A.....	:	1200					
KT247593.1	PUUV	N	France	M.g.	|08|	Ardennes/Mg75/201	:	.....A.....A.....G.....	:	1200					
KT247592.1	PUUV	N	France	M.g.	|08|	Ardennes/Mg156/20	:	.....C.....C.....A.....	:	1200					
2015.00019	PUUV	N	France	H.s.	|08|	ETEIGNIERES	:	.....T.....A.....G.....A.....	:	1200					
2016.00239	PUUV	N	France	H.s.	|08|	VIREUX-MOLHAIN	:	.....A.....G.....	:	1200					
2015.00329	PUUV	N	France	H.s.	|08|	BOGNY-SUR-MEUSE	:	.....A.....G.....	:	1200					
2014.00209	PUUV	N	France	H.s.	|08|	TREMBLOIS-LES-ROC	:	.....T.....A.....G.....	:	1200					
2015.00456	PUUV	N	France	H.s.	|94|	ALFORTVILLE	:	.....A.....G.....	:	1200					
2012.00018	PUUV	N	France	H.s.	|08|	ROCROI	:	.....T.....A.....G.....	:	1200					
AJ277032.1	PUUV	N	Belgium	M.g.	|Momignies/47Cg/96|		:	.....A.....G.....	:	1200					
AJ277034.1	PUUV	N	Belgium	M.g.	|Couvin/59Cg/97|		:	.....A.....G.....	:	1200					
AJ277033.1	PUUV	N	Belgium	M.g.	|Momignies/55Cg/96|		:	.....A.....G.....	:	1200					
2012.00638	PUUV	N	France	H.s.	|08|	GIVET	:	G.....A.....G.....	:	1200						
2015.00328	PUUV	N	France	H.s.	|08|	VRIGNE-MEUSE	:	.....T.....A.....G.....A.....	:	1200					
2015.00419	PUUV	N	France	H.s.	|08|	DOUZY	:	.....G.....A.....G.....A.....	:	1200					
2016.00310	PUUV	N	France	H.s.	|08|	THIN-LE-MOUTIER	:	.....A.....	:	1200					
AJ277030.1	PUUV	N	Belgium	M.g.	|Thuin/33Cg/96|		:	.....G.....A.....	:	1200					
AJ238779.1	PUUV	N	Germany	M.g.	|NRW/Cg-Erft|		:	.....T.....T.....C.....	:	1200					
2014.00276	PUUV	N	France	H.s.	|59|	LILLE	:	G.....C.....C.....G.....	:	1200						
U22423.1	PUUV	N	Belgium	M.g.	|CG13891|		:	.....C.....T.....A.....C.....G.....A.....A.....T.....	:	1200					
2014.00321	PUUV	N	France	H.s.	|59|	FOURMIES	:	.....C.....	:	1200					
2015.00457	PUUV	N	France	H.s.	|55|	REVIGNY-SUR-ORNAI	:	.....T.....C.....C.....A.....	:	1200					
2013.00250	PUUV	N	France	H.s.	|62|	VENDIN-LS-BTHUNE	:	.....T.....A.....C.....C.....G.....GA.....A.....	:	1200					
2016.00282	PUUV	N	France	H.s.	|59|	MORBECQUE	:	.....A.....C.....C.....A.....A.....	:	1200					
AJ277076.1	PUUV	N	Belgium	M.g.	|Montbliart/CG14445|		:	.....C.....A.....	:	1200					
2014.00153	PUUV	N	France	H.s.	|02|	BUIRONFOSSE	:	.....C.....A.....A.....	:	1200					
2014.00171	PUUV	N	France	H.s.	|59|	SAINT-SAULVE	:	.....T.....C.....C.....T.....A.....	:	1200					
2016.00293	PUUV	N	France	H.s.	|60|	LA-NEUVILLE-SUR-R	:	.....G.....C.....A.....	:	1200					
2014.00499	PUUV	N	France	H.s.	|94|	CHAMPIGNY-SUR-MAR	:	.....T.....G.....C.....A.....A.....	:	1200					
2012.00057	PUUV	N	France	H.s.	|59|	COUSOLRE	:	.....C.....A.....	:	1200					
2012.00349	PUUV	N	France	H.s.	|02|	ENGLANCOURT	:	.....G.....C.....A.....A.....	:	1200					
2014.00135	PUUV	N	France	H.s.	|02|	ATHIES-SOUS-LAON	:	.....T.....G.....C.....A.....A.....	:	1200					
2014.00184	PUUV	N	France	H.s.	|59|	FOURMIES	:	.....A.....C.....A.....	:	1200					
2016.00182	PUUV	N	France	H.s.	|08|	BOULZICOURT	:	.....T.....C.....A.....	:	1200					
2016.00286	PUUV	N	France	H.s.	|02|	TRUCY	:	.....T.....G.....C.....A.....A.....	:	1200					
2016.00325	PUUV	N	France	H.s.	|59|	AULNOYE-AYMERIES	:	.....T.....G.....C.....A.....	:	1200					
2016.00452	PUUV	N	France	H.s.	|02|	LAON	:	.....T.....G.....C.....A.....A.....	:	1200					
2016.00467	PUUV	N	France	H.s.	|02|	AISNE	:	.....C.....A.....A.....	:	1200					

	*	1120	*	1140	*	1160	*	1180	*	1200	
2014.00598 | PUUV | N | France | H.s. | 59 | FOURMIES |	:	ATCATACCTGCGGAGGACTCAATCAATGGGAATACAGCTTGACCAAAGAATTATCTTATTGTATATGCTTGAATGGGGCAAGGAAATGGTGGATCATTTT	:	1200	:		:		:		1200
GQ339477.1 | PUUV | N | Sweden | M.g. | Aijajarvi/Mg9/05 |	:	...T...T...AC...A.....C..A.....G..G....TC.C...T...T.A.....A..A.....T....C... :		1200	:		:		:		1200
GQ339478.1 | PUUV | N | Sweden | M.g. | Jockfall/Mg12/05 |	:	...C...T.A.AC.A..A..G.....T..A....T....G....TC.C...T.....A.....G..A.....C..C..C... :		1200	:		:		:		1200
GQ339482.1 | PUUV | N | Sweden | M.g. | Kalvudden/Mg22/05 |	:	...C...T...AC...A..G.....C..A....T....G....TC.CC...T...A.A.....A..A.....T..C..C... :		1200	:		:		:		1200
GQ339479.1 | PUUV | N | Sweden | M.g. | Moskosel/Mg17/05 |	:	...C...T.A.AC...A..G.....C....C.....G....TC.CC.T.T...T.A.....A..A.....T..C..C... :		1200	:		:		:		1200
GQ339481.1 | PUUV | N | Sweden | M.g. | Ljustask/Mg20/05 |	:	...C...A.AC...A..G.....C....C.....G....TC.TC...T...T.A.....T..A.....T..C..C... :		1200	:		:		:		1200
GQ339480.1 | PUUV | N | Sweden | M.g. | Gyttjea/Mg19/05 |	:	...C...A.AC...A..G.....C....C.....G....TC.CC...T...T.A..G...A..A.....T..C..C... :		1200	:		:		:		1200
AY526219.1 | PUUV | N | Sweden | Human | Umea/hu |	:	G..C..TT.A..C...A..G.....C..A....T....G....C.C.....C.A..G...A..A.G...T..C..C... :		1200	:		:		:		1200
AJ223380.1 | PUUV | N | Sweden | M.g. | Tavelso/Cg81/94 |	:	G..T..TT.A..C...A..G.....C.....T..G..G....TC.C..A.....A..A.G...T..C..C... :		1200	:		:		:		1200
U14137.1 | PUUV | N | Bosnia-H. | M.g. | Vranica |	:	G..T..TT.A..C...A..G.....C.....T..G..G....TC.C..A.....A..A.G...T..C..C... :		1200	:		:		:		1200
AJ223371.1 | PUUV | N | Sweden | M.g. | Huggberget/Cg36/94 |	:	...T..TT.A..C...A..G.....C.....T..G..G....TC.C.....A..A.G...T..C..C... :		1200	:		:		:		1200
Z48586.1 | PUUV | N | Sweden | M.g. | Vindeln/L20Cg/83 |	:	G..T..TT.A..C...A..G.....C....G..T..G..G....TC.C.....A..A.G...T..C..C... :		1200	:		:		:		1200
AJ223374.1 | PUUV | N | Sweden | M.g. | Mellansel/Cg47/94 |	:	G..T..TT.A..C...A..G.....C.....G.....G....C.C.....A..A.G...T..C..C... :		1200	:		:		:		1200
AJ223375.1 | PUUV | N | Sweden | M.g. | Mellansel/Cg49/94 |	:	G..T..TT.A..C...A..G.....C.....G.....G....C.C.....A..A.G...T..C..C... :		1200	:		:		:		1200
AJ238791.1 | PUUV | N | Denmark | M.g. | Fyn/19 |	:	.....T..A..C.A.....C.....G..T....G.....TC.T.....C.....G..A..G...A.....C..C : 1200		1200	:		:		:		1200
AJ278092.1 | PUUV | N | Denmark | M.g. | Fyn47 |	:	.....T..A.AC.A..C...CG...G..T....A.....TC.TC.....A.GA..G...T..C..C..C : 1200		1200	:		:		:		1200
AJ278093.1 | PUUV | N | Denmark | M.g. | Fyn131 |	:	.....T..A.AC.A..C...C.....G..T....A.....TC.TC.....A.GA..G...T..C..C..C : 1200		1200	:		:		:		1200
AJ223368.1 | PUUV | N | Norway | M.g. | Eidsvoll/1124v |	:	G..C..T.....C.A.....G..T.....TC.T..A.....A..G...A.....C : 1200		1200	:		:		:		1200
AJ223369.1 | PUUV | N | Norway | M.g. | Eidsvoll/Cg1138/87 |	:	G..C..T.....C.A.....G..T.....TC.T..A.....A..G...A.....C : 1200		1200	:		:		:		1200
JN657228.1 | PUUV | N | Latvia | M.g. | Jelgava/Mg149/2008 |	:	G.....C..CC.....G.....G.....C.TC.....A.....T.....C.....C : 1200		1200	:		:		:		1200
KX757839.1 | PUUV | N | Lithuania | M.g. | LT15/164 | 2015 |	:	.....A..AC.A.....G.....T..G.....C.C.....C...T.G..G...T..A.....A.....C..C : 1200		1200	:		:		:		1200
KX757840.1 | PUUV | N | Lithuania | M.g. | LT15/174 | 2015 |	:	.....A..C.A.....G.....T..G.....C.C.....C...T.G..G...T..A.....A.....C..C : 1200		1200	:		:		:		1200
KX815394.1 | PUUV | N | Poland | M.g. | KS13/855 | 2009 |	:	..G....A..C...C..G.....G.....T.....C.C.....G.....T..A.....A.....C..C..C : 1200		1200	:		:		:		1200
KX757841.1 | PUUV | N | Lithuania | M.g. | LT15/201 | 2015 |	:	.....A..AC.A.....G.....T..G.....C.C.....C...T.G..G...T..A.....A.....C..C : 1200		1200	:		:		:		1200
AJ314598.1 | PUUV | N | Russia | M.g. | Baltic/49Cg/00 |	:	.....A..CC...A...A.....T.....A.....T..G..A..C.TC.A.C...T.G.....A..A.....C..C..C : 1200		1200	:		:		:		1200
AJ314599.1 | PUUV | N | Russia | M.g. | Baltic/205Cg/00 |	:	G.....A..CC...A..G..T.....C..A....T.....A...C.T..A.C...T.G.....A..A.....C..C..C : 1200		1200	:		:		:		1200
JN657229.1 | PUUV | N | Latvia | M.g. | Madona/Mg99/2008 |	:	.....CC...A...G...G..T..A....T...C.G..A..C.TC.A.C...T.G.....G..A.....C..C..C : 1200		1200	:		:		:		1200
JN657232.1 | PUUV | N | Latvia | M.g. | Madona/Mg233/2008 |	:	.....CC...A...G...G..T..A....T...C.G..A..C.TC.A.C...T.G.....G..A.....C..C..C : 1200		1200	:		:		:		1200
JN657230.1 | PUUV | N | Latvia | M.g. | Jelgava/Mg136/2008 |	:	G.....TT...CC...A.....G..T..A....T...G..A..C.TC.A.C...T.G..G...A..A.....C..C..C : 1200		1200	:		:		:		1200
JN657231.1 | PUUV | N | Latvia | M.g. | Jelgava/Mg140/2008 |	:	G.....TT...CC...A.....G..T..A....T...G..A..C.TC.A.C...T.G..G...A..A.....C..C..C : 1200		1200	:		:		:		1200
Z30707.1 | PUUV | N | Russia | M.g. | Udmurtia/458Cg/88 |	:	.....A..CC...A...G...T..A....T...G..G..A..C..C...C...T.G..G...G..A.....C : 1200		1200	:		:		:		1200
Z30706.1 | PUUV | N | Russia | M.g. | Udmurtia/444Cg/88 |	:	.....A..CC...A...G...T..A....T...G..G..A..C..C...C...T.G..G...G..A.....C : 1200		1200	:		:		:		1200
Z84204.1 | PUUV | N | Russia | M.g. | Kazan |	:	.....A..CC...A...G...T..A....T...G..G..A..C..C...C...T.G..G...G..A.....C : 1200		1200	:		:		:		1200
Z30708.1 | PUUV | N | Russia | M.g. | Udmurtia/338Cg/92 |	:	.....A..CC...A...G...T..A....T...G..G..A..C..C...C...T.G..G...G..A.....C : 1200		1200	:		:		:		1200
Z21497.1 | PUUV | N | Russia | M.g. | Udmurtia/894Cg/91 |	:	.....A..TC...A...G...T..A....T...G..G..A..TC..C.A.C...T.G..G...G..A.....C : 1200		1200	:		:		:		1200
AB433843.2 | PUUV | N | Russia | M.g. | Samara_49/CG/2005 |	:	G.....TT...CC...A...G...T..A....T...G..G..A..C..C...C...T.G..G...A..A.....C : 1200		1200	:		:		:		1200
AB433845.2 | PUUV | N | Russia | M.g. | Samara_94/CG/2005 |	:	G.....T...CC...A...A.....T..A....T...G..G..A..C..C...C...T.G..G...A..A.....C : 1200		1200	:		:		:		1200
L11347.1 | PUUV | N | Russia | Human | P360 |	:	.....TT...CC.A..A.....G..T..A....T...G..G..A..C..C...C...T.G..G...A..A.....C : 1200		1200	:		:		:		1200
AB297665.2 | PUUV | N | Russia | M.g. | DTK/Ufa-97 | 1997 |	:	.....TT...CC.A..A.....G..T..A....T...G..G..A..C..C...C...T.G..G...A..A.....C : 1200		1200	:		:		:		1200
M32750.1 | PUUV | N | Russia | M.g. | CG1820 |	:	.....TT...CC.A..A.....G..T..A....T...G..G..A..C..C...C...T.G..G...A.GA.....C : 1200		1200	:		:		:		1200
AF442613.1 | PUUV | N | Russia | M.g. | CG17/Baskiria-2001 |	:	.....TT...CC.A..A.....G..T..A....T...G..G..A..C..C...C...T.G..G...A..A.....C : 1200		1200	:		:		:		1200
KX815395.1 | PUUV | N | Poland | M.g. | KS14/118 | 2009 |	:	.....T..A..TC...A...A.....G..C..A....T...G..G..A..C..CC.....T.A.....A..A.....C : 1200		1200	:		:		:		1200
GQ339483.1 | PUUV | N | Sweden | M.g. | Bergsjobo/Mg25/05 |	:	...C..T...AC.....C.....C..A.....G....TC.T.....A..G.....C : 1200		1200	:		:		:		1200
AJ223377.1 | PUUV | N | Sweden | M.g. | Solleftea/Cg6/95 |	:	...C..T..A.AC.....C.....C..A.....G....TC.T.....A..G.....C : 1200		1200	:		:		:		1200
GQ339484.1 | PUUV | N | Sweden | M.g. | Faboviken/Mg26/05 |	:	.....T...AC.....G..C..A.....G....C.T.....A.....A.G.....C : 1200		1200	:		:		:		1200
GQ339485.1 | PUUV | N | Sweden | M.g. | Mangelbo/Mg1/05 |	:	G..T..T...AC.....G.....C..A.....C.....C.....A..G...A..C.....C : 1200		1200	:		:		:		1200
GQ339486.1 | PUUV | N | Sweden | M.g. | Munga/Mg2/05 |	:	G..T..T...AC.....G.....C..A.....C.....C.....A..G...A..C.....C : 1200		1200	:		:		:		1200
GQ339487.1 | PUUV | N | Sweden | M.g. | Munga/Mg16/05 |	:	G..T..T...AC.....G.....C..A.....C.....C.....A..G...A..C.....C : 1200		1200	:		:		:		1200
AJ223376.1 | PUUV | N | Sweden | M.g. | Solleftea/Cg3/95 |	:	...C..T...AC.....G.....G..C..A.....G....C.T.....A.....T..A.....A..C.....C : 1200		1200	:		:		:		1200
AF367071.1 | PUUV | N | Russia | M.r. | CRF366 |	:	...T..TT...CC.A.....G.....T.....G....C.TC.A.C...T.A.....T..A.....C..C : 1200		1200	:		:		:		1200
AF367064.1 | PUUV | N | Russia | M.g. | CG144 |	:	...T..TT...CC.A.....G.....T.....G....C.TC.A.C...T.A.....T..A.....C..C : 1200		1200	:		:		:		1200
AF367065.1 | PUUV | N | Russia | M.g. | CG168 |	:	...T..TT...CC.A.....G.....T.....G....C.TC.A.C...T.A.....T..A.....C..C : 1200		1200	:		:		:		1200
AF367068.1 | PUUV | N | Russia | M.g. | CG315 |	:	...T..TT...CC.A.....G.....T.....G....C.TC.A.C...T.A.....T..A.....C..C : 1200		1200	:		:		:		1200
AF367069.1 | PUUV | N | Russia | M.r. | CRF161 |	:	...T..TT...CC.A.....G.....T.....G....C.TC.A.C...T.A.....T..A.....C..C : 1200		1200	:		:		:		1200

	*	1120	*	1140	*	1160	*	1180	*	1200	
2014.00598|PUUV|N|France|H.s.|59|FOURMIES|	:	ATCATACCTGCGGAGGACTCAATCAATGGGAATACAGCTTGACCAAAGAATTATCTTATTGTATATGCTTGAATGGGGCAAGGAAATGGTGGATCATTTT	:	1200							
AF367070.1|PUUV|N|Russia|M.r.|CRF308|	:	...TT...CC.A.....G.....T....G.....C.TC.A..C...T.A.....T.A.....C	:	1200							
AF367066.1|PUUV|N|Russia|M.g.|CG215|	:	...TT...CC.A.....G.....T....G.....C.TC.A..C...T.A.....T.A.....C	:	1200							
AF367067.1|PUUV|N|Russia|M.g.|CG222|	:	...TT...CC.A.....G.....T....G.....C.TC.A..C...T.A.....T.A.....C	:	1200							
Z46942.1|PUUV|N|Finland|M.g.|Puumala/1324Cg/79|	:	...T...A..TC.....T..A.....G.....C...C...TC...T.A.....T.A..G.....C	:	1200							
Z30702.1|PUUV|N|Finland|M.g.|Evo/12Cg/93|	:	...T...T.A..CC.....T.....C..TC.T...TC...T.G.....C	:	1200							
Z30703.1|PUUV|N|Finland|M.g.|Evo/13Cg/93|	:	...T...T.A..CC.....T.....C..TC.T...TC...T.G.....C	:	1200							
Z30704.1|PUUV|N|Finland|M.g.|Evo/14Cg/93|	:	...T...T.A..CC.....T.....C..TC.C...TC...T.G.....C	:	1200							
Z30705.1|PUUV|N|Finland|M.g.|Evo/15Cg/93|	:	...T...T.A..CC.....T.....C..TC.T...TC...T.G.....A.....C	:	1200							
Z69985.1|PUUV|N|Finland|M.g.|Virrat/25Cg/95|	:	...T..TT.A..CC.A.....G..T..A.....TC.T...TC...T.G.....T..A..G...A.....C	:	1200							
JN831947.1|PUUV|N|Finland|Pieksamaki/human_lung/20|	:	...T...T...CC...C.....G..C..A...T..G...C...C...TC...T.A..G...T..A..G.....C..C	:	1200							
JN831943.1|PUUV|N|Finland|Pieksamaki/Mg7/2008|	:	...T...T...CC...C.....G..C..A...T..G...C...C...TC...T.A..G...T..A..G.....C..C	:	1200							
JN831950.1|PUUV|N|Finland|Pieksamaki/human_kidney/|	:	...T...T...CC...C.....G..C..A...T..G...C...C...TC...T.A..G...T..A..G.....C..C	:	1200							
JQ319166.1|PUUV|N|Finland|Konnesvesi/Mg_O14B/2005|	:	G..T...T.A..CC.....T..T..A.....G.....C..C...TC...T.G.....A..G.....C	:	1200							
JQ319169.1|PUUV|N|Finland|Konnesvesi/Mg_O27B/2005|	:	G..T...T.A..CC.....T..T..A.....G.....C..C...TC...T.G.....A..G.....C	:	1200							
JQ319167.1|PUUV|N|Finland|Konnesvesi/Mg_O15B/2005|	:	G..T..TT.A..CC.....C..A.....G.....C..C..A.TC...T.G.....T..A..G.....C	:	1200							
JQ319164.1|PUUV|N|Finland|Konnesvesi/Mg_O6B/2005|	:	G..T...T.A..CC.....T..T..A.....G.....C..C...TC...T.G.....A..G.....C	:	1200							
JQ319165.1|PUUV|N|Finland|Konnesvesi/Mg_O9B/2005|	:	G..T...T.A..CC.....T..T..A.....G.....C..C...TC...T.G.....A..G.....C	:	1200							
JQ319170.1|PUUV|N|Finland|Konnesvesi/Mg_O74B/2005|	:	G..T...T.A..CC.....T..T..A.....G.....C..C...TC...T.G.....A..G.....C	:	1200							
JQ319171.1|PUUV|N|Finland|Konnesvesi/Mg_M114B/2005|	:	G..T..TT.A..CC.....C..A.....G.....C..C..A.TC...T.G.....T..A..G.....C	:	1200							
AJ238788.1|PUUV|N|Russia|M.g.|Karhumaki|	:	G..T..TT.A..CC.A.....G.....T.....G..C..TC.C...TC...T.G.....A..G...A.....C	:	1200							
AJ238789.1|PUUV|N|Russia|M.g.|Kolodozero|	:	...T...A..CC.....C.....T.CA.....G..C..TC.T..A.TC...T.G.....C..A..G...A....C..C	:	1200							
AJ314597.1|PUUV|N|Finland|M.g.|Pallasjarvi/63Cg/98|	:	...T...T.A..TC.....T..A.....TC.C...TC...T.G.....A..G...A.....C	:	1200							
NC_005224.1|PUUV|N|Finland|M.g.|Sotkamo-revu-NCBI2|	:	...T...TC.A.....T.....T.....C..C...T...T.G.....A..G...A....C..C	:	1200							
AJ238790.1|PUUV|N|Russia|M.g.|Gomselga|	:	...T...A..TC.A.....T.....C..TC.C...TC...T.G...G...T..A..G.....C..C	:	1200							
AB010731.1|Hokkaido-V|N|Japan|M.r.|Tobetsu-60Cr-93|	:	...TT.AA..C.T.....G..C..A.....G..A...C.G..A..C.....G...A..A..G.....C...	:	1200							
AB010730.1|Hokkaido-V|N|Japan|M.r.|Kamiiso-8Cr-95|	:	...TT.AA..C.C.....G..T..A..C.....G..A...G..A..C.....G...A..A..G...A....C...	:	1200							
JX046487.1|Muju-V|N|South-Korea|M.r.|11-5|2011|	:	G.....TT..A..C...A.....A..G.....C..G...TC..C.T..C.....A.....A..C..C..C	:	1200							
JX046484.1|Muju-V|N|South-Korea|M.r.|11-4|2011|	:	G.....TT..A..C...A.....A..G.....C..G...TC..C.T..C.....A.....A..C..C..C	:	1200							
JX028273.1|Muju-V|N|South-Korea|M.r.|11-1|2011|	:	G.....TT..A..C...A.....A..G.....C..G...T...C.T..C.....A.....A..C..C..C	:	1200							
DQ138128.1|Muju-V|N|South-Korea|E.r.|00-18|	:	.....CA..C...A..G.....C..A..G..T..G..G...TC..C.C.....G...A..A..G...A....C...	:	1200							
DQ138140.1|Muju-V|N|South-Korea|E.r.|99-27|	:	.....CA..C...A..G.....C..A..G..T..G..G...TC..C.C.....G...A..A..G...A....C...	:	1200							
DQ138133.1|Muju-V|N|South-Korea|E.r.|96-1|	:	.....CA..C...A..G.....C..A..G..T..G..G...TC..C.C.....G...A..A..G...A....C...	:	1200							
DQ138142.1|Muju-V|N|South-Korea|E.r.|99-28|	:	.....CA..C...A..G.....C..A..G..T..G..G...TC..C.C.....G...A..A..G...A....C...	:	1200							

						*	1220	*	1240	*	1260	*	1280	*	1300	
2014.00598	PUUV	N	France	H.s.	59	FOURMIÉS	:	CACCTCGGGATGATATGGATCCTGAGCTTAGGGCCCTTGCACAGGCGCTTATTGATCAAAAAGTAAAGGAGATCTCCAACCAAGAGCCCTTAAAAATAT	:	1300						
2014.00233	PUUV	N	France	H.s.	59	FOURMIÉS	:	.....T.....	:	1300					
2014.00097	PUUV	N	France	H.s.	02	SAINT-MICHEL	:	.....T.....	:	1300					
2014.00488	PUUV	N	France	H.s.	08	SIGNY-LE-PETIT	:	.....T.....	:	1300					
2014.00613	PUUV	N	France	H.s.	59	FOURMIÉS	:	.....T.....	:	1300					
2015.00402	PUUV	N	France	H.s.	08	CHARLEVILLE-MEZIE	:	.....T.T.....	:	1300					
2015.00422	PUUV	N	France	H.s.	59	ANOR	:	.....T.....	:	1300					
2015.00488	PUUV	N	France	H.s.	08	SEDAN	:	.....T.....	:	1300					
2015.00498	PUUV	N	France	H.s.	08	REMILLY-AILLICOUR	:	.....T.....	:	1300					
2016.00295	PUUV	N	France	H.s.	08	CORNY-MACHEROMENI	:	.....T.....	:	1300					
2016.00333	PUUV	N	France	H.s.	59	FOURMIÉS	:	.....T.....	:	1300					
2016.00345	PUUV	N	France	H.s.	59	FOURMIÉS	:	.....T.....	:	1300					
2016.00357	PUUV	N	France	H.s.	02	HIRSON	:	.....T.....	:	1300					
2016.00427	PUUV	N	France	H.s.	59	FOURMIÉS	:	.....T.....	:	1300					
2016.00469	PUUV	N	France	H.s.	02	PREMONTRE	:	..T.T.T.....	:	1300						
AJ277075.1	PUUV	N	Belgium	M.g.		Montbliart/CG14444	:	.....T.....	:	1300					
2014.00053	PUUV	N	France	H.s.	08	SECHEVAL	:	.....T.....	:	1300					
KT247593.1	PUUV	N	France	M.g.	08	Ardennes/Mg75/201	:	.....T.....	:	1300					
KT247592.1	PUUV	N	France	M.g.	08	Ardennes/Mg156/20	:	.....T.....	:	1300					
2015.00019	PUUV	N	France	H.s.	08	ETEIGNIERES	:	.....T.....	:	1300					
2016.00239	PUUV	N	France	H.s.	08	VIREUX-MOLHAIN	:	.....T.....	:	1300					
2015.00329	PUUV	N	France	H.s.	08	BOGNY-SUR-MEUSE	:	.....T.....	:	1300					
2014.00209	PUUV	N	France	H.s.	08	TREMBLOIS-LES-ROC	:	.....T.T.....	:	1300					
2015.00456	PUUV	N	France	H.s.	94	ALFORTVILLE	:	.....T.....	:	1300					
2012.00018	PUUV	N	France	H.s.	08	ROCROI	:	.....T.T.....	:	1300					
AJ277032.1	PUUV	N	Belgium	M.g.		Momignies/47Cg/96	:	.....T.....	:	1300					
AJ277034.1	PUUV	N	Belgium	M.g.		Couvin/59Cg/97	:	.....T.....	:	1300					
AJ277033.1	PUUV	N	Belgium	M.g.		Momignies/55Cg/96	:	.....TA.....	:	1300					
2012.00638	PUUV	N	France	H.s.	08	GIVET	:	.....T.....	:	1300					
2015.00328	PUUV	N	France	H.s.	08	VRIGNE-MEUSE	:	.....T.....	:	1300					
2015.00419	PUUV	N	France	H.s.	08	DOUZY	:	.....T.....	:	1300					
2016.00310	PUUV	N	France	H.s.	08	THIN-LE-MOUTIER	:	.....T.....	:	1300					
AJ277030.1	PUUV	N	Belgium	M.g.		Thuin/33Cg/96	:	.....T.....	:	1300					
AJ238779.1	PUUV	N	Germany	M.g.		NRW/Cg-Erft	:	.....T.....	:	1300					
2014.00276	PUUV	N	France	H.s.	59	LILLE	:	.....T.....	:	1300					
U22423.1	PUUV	N	Belgium	M.g.		CG13891	:	.....T.....	:	1300					
2014.00321	PUUV	N	France	H.s.	59	FOURMIÉS	:	.....T.....	:	1300					
2015.00457	PUUV	N	France	H.s.	55	REVIGNY-SUR-ORNAI	:	..T.T.T.....	:	1300						
2013.00250	PUUV	N	France	H.s.	62	VENDIN-LS-BTHUNE	:	.....T.G.....	:	1300					
2016.00282	PUUV	N	France	H.s.	59	MORBECQUE	:	.....T.G.....	:	1300					
AJ277076.1	PUUV	N	Belgium	M.g.		Montbliart/CG14445	:	.....T.....	:	1300					
2014.00153	PUUV	N	France	H.s.	02	BUIRONFOSSE	:	.....T.T.....	:	1300					
2014.00171	PUUV	N	France	H.s.	59	SAINT-SAULVE	:	.....T.T.C.....	:	1300					
2016.00293	PUUV	N	France	H.s.	60	LA-NEUVILLE-SUR-R	:	.....T.T.....	:	1300					
2014.00499	PUUV	N	France	H.s.	94	CHAMPIGNY-SUR-MAR	:	.....T.....	:	1300					
2012.00057	PUUV	N	France	H.s.	59	COUSOLRE	:	.....T.....	:	1300					
2012.00349	PUUV	N	France	H.s.	02	ENGLANCOURT	:	.....T.T.....	:	1300					
2014.00135	PUUV	N	France	H.s.	02	ATHIES-SOUS-LAON	:	.....T.....	:	1300					
2014.00184	PUUV	N	France	H.s.	59	FOURMIÉS	:	..T.T.T.....	:	1300						
2016.00182	PUUV	N	France	H.s.	08	BOULZICOURT	:	.....T.....	:	1300					
2016.00286	PUUV	N	France	H.s.	02	TRUCY	:	.....T.....	:	1300					
2016.00325	PUUV	N	France	H.s.	59	AULNOYE-AYMERIES	:	.....T.....	:	1300					
2016.00452	PUUV	N	France	H.s.	02	LAON	:	.....T.....	:	1300					
2016.00467	PUUV	N	France	H.s.	02	AISNE	:	..T.T.....	:	1300						

	*	1220	*	1240	*	1260	*	1280	*	1300	
2014.00598 | PUUV | N | France | H.s. | 59 | FOURMIES |	:	CACCTCGGGATGATATGGATCCTGAGCTTAGGGCCCTTGCACAGGCGCTTATTGATCAAAAAGTAAAGGAGATCTCCAACCAAGAGCCCTTAAAAATAT	:	1300	:		:		:		1300
GQ339477.1 | PUUV | N | Sweden | M.g. | Aijajarvi/Mg9/05 |	:	..T.G..T....C.....A..T....C....A..G.....G..G.....T..T..G..A..A..G.....	:	1300	:		:		:		1300
GQ339478.1 | PUUV | N | Sweden | M.g. | Jockfall/Mg12/05 |	:	..T.G..T....C.....T.....C....A..G.....G..G.....T..T..G..A..AC.T.....	:	1300	:		:		:		1300
GQ339482.1 | PUUV | N | Sweden | M.g. | Kalvudden/Mg22/05 |	:	..TT.G..T.....A.....A..T....C....A..G.....C....G..G..A...T..T..G..A..AC.T.....	:	1300	:		:		:		1300
GQ339479.1 | PUUV | N | Sweden | M.g. | Moskosel/Mg17/05 |	:	..G..T.....A..T....C....A..G.....G..G..G.....T..T..G..A..AC.T.....	:	1300	:		:		:		1300
GQ339481.1 | PUUV | N | Sweden | M.g. | Ljustask/Mg20/05 |	:	..T.G..T.....A..T....C....AT.G.....G..G..G.....T..T..G..A..AC.T.....	:	1300	:		:		:		1300
GQ339480.1 | PUUV | N | Sweden | M.g. | Gyttjea/Mg19/05 |	:	..T.G..T..C.....A..T....C....A..G.....G..G..G.....T..T..G..A..AC.T.....	:	1300	:		:		:		1300
AY526219.1 | PUUV | N | Sweden | Human | Umea/hu |	:	..G..T....C.....G..A..C..A..T....C....AT.G.....G.....A..T..T..G..T..AC.T..G....	:	1300	:		:		:		1300
AJ223380.1 | PUUV | N | Sweden | M.g. | Tavelso/Cg81/94 |	:	..T.G..T....C.....C..A..T....C....A..G.....G..G.....A..A..A..T..T..G..T..AC.T..G....	:	1300	:		:		:		1300
U14137.1 | PUUV | N | Bosnia-H. | M.g. | Vranica |	:	..T.G..T....C.....C..A..T....C....A..G.....G..G.....A..A..A..T..T..G..T..AC.T..G....	:	1300	:		:		:		1300
AJ223371.1 | PUUV | N | Sweden | M.g. | Huggberget/Cg36/94 |	:	..T.G..T....C.....A..A..T....C....A..G.....G..G.....A..A..A..T..T..G..T..AC.T..G....	:	1300	:		:		:		1300
Z48586.1 | PUUV | N | Sweden | M.g. | Vindeln/L20Cg/83 |	:	..T.G..T....C.....C..A..T....C....A..G.....G..G.....A..A..A..T..T..G..T..GC.T..G....	:	1300	:		:		:		1300
AJ223374.1 | PUUV | N | Sweden | M.g. | Mellansel/Cg47/94 |	:	..T.G..T....C.....C..A..T....C....AT.G.....G.....A..T..T..G..T..AC.T..G....	:	1300	:		:		:		1300
AJ223375.1 | PUUV | N | Sweden | M.g. | Mellansel/Cg49/94 |	:	..T.G..T....C.....C..A..T....C....AT.G.....GG.....A..T..T..G..T..AC.T..G....	:	1300	:		:		:		1300
AJ238791.1 | PUUV | N | Denmark | M.g. | Fyn/19 |	:	....A..T....C.....C..A..T....C....A..A.....G....C....A..A..T..T..A..T..G.....	:	1300	:		:		:		1300
AJ278092.1 | PUUV | N | Denmark | M.g. | Fyn47 |	:	..T..A..T....C.....A..CC.A.....AT.A.....G.....C..A..A..A..T..T..G..A..T..G..G....	:	1300	:		:		:		1300
AJ278093.1 | PUUV | N | Denmark | M.g. | Fyn131 |	:	..T..A..T....C.....A..CC.A.....AT.A..A.....G....C..A..A..A..T..T..G..A..T..G..G....	:	1300	:		:		:		1300
AJ223368.1 | PUUV | N | Norway | M.g. | Eidsvoll/1124v |	:	.....T....C.....A.....C..A..T..G.....TT.A.....G..A....A..T..T..G....TC.....T..	:	1300	:		:		:		1300
AJ223369.1 | PUUV | N | Norway | M.g. | Eidsvoll/Cg1138/87 |	:	.....T....C.....A.....C..A..T..G.....TT.A.....G..A....A..T..T..G....TC.....T..	:	1300	:		:		:		1300
JN657228.1 | PUUV | N | Latvia | M.g. | Jelgava/Mg149/2008 |	:	..T..T..T....C.....T.G..A..T.....A..A..G..A.....G.....G..A....A..T..T..G..A.....G....	:	1300	:		:		:		1300
KX757839.1 | PUUV | N | Lithuania | M.g. | LT15/164/2015 |	:	..T..T..T....C.....A.....A..A..T.....A..G..A..C..G....G..A..A..A..T.....G....	:	1300	:		:		:		1300
KX757840.1 | PUUV | N | Lithuania | M.g. | LT15/174/2015 |	:	..T..T..T....C.....A.....A..A..T.....AT.G..A..C..G....G..A..A..A..T.....G....	:	1300	:		:		:		1300
KX815394.1 | PUUV | N | Poland | M.g. | KS13/855/2009 |	:	..T..T..T....C.....A.....G..A..T.....A..A..A..A..C..G....G....A..T..A.....G....	:	1300	:		:		:		1300
KX757841.1 | PUUV | N | Lithuania | M.g. | LT15/201/2015 |	:	..T..T..T....C.....A.....A..A..T.....A..G..A..C..G....G..A..A..A..T.....G....	:	1300	:		:		:		1300
AJ314598.1 | PUUV | N | Russia | M.g. | Baltic/49Cg/00 |	:	..T..T..T....C.....A..C....T....C....AT.G.....G.....A..A..A..A..T.....G....	:	1300	:		:		:		1300
AJ314599.1 | PUUV | N | Russia | M.g. | Baltic/205Cg/00 |	:	..T..T..T....C.....A.....T..A..T....AT.G.....G..G.....A..A..A..A..T.....G....	:	1300	:		:		:		1300
JN657229.1 | PUUV | N | Latvia | M.g. | Madona/Mg99/2008 |	:	..T..T..T....C.....A.....T....T....AT.G.....G.....A.....A..A..T.....A.....	:	1300	:		:		:		1300
JN657232.1 | PUUV | N | Latvia | M.g. | Madona/Mg233/2008 |	:	..T..T..T....C.....A.....T....T....AT.G.....G.....A.....A..A..T.....A.....	:	1300	:		:		:		1300
JN657230.1 | PUUV | N | Latvia | M.g. | Jelgava/Mg136/2008 |	:	..T..T..T....C.....A..C....T....C....AT.G.....G.....G..A..A..A..T.....G....	:	1300	:		:		:		1300
JN657231.1 | PUUV | N | Latvia | M.g. | Jelgava/Mg140/2008 |	:	..T..T..T....C.....A..C....T....C....AT.G.....G.....G..A..A..A..T.....G....	:	1300	:		:		:		1300
Z30707.1 | PUUV | N | Russia | M.g. | Udmurtia/458Cg/88 |	:	..T..T..T....C.....A..A.....T....T..A..C..A..C..G..G....A.....A..A..T..G.....G....	:	1300	:		:		:		1300
Z30706.1 | PUUV | N | Russia | M.g. | Udmurtia/444Cg/88 |	:	..T..T..T....C.....A..A.....T....T..A..C..A..C..G..G....A.....A..A..T..G.....G....	:	1300	:		:		:		1300
Z84204.1 | PUUV | N | Russia | M.g. | Kazan |	:	..T..T..T....C.....A..A.....T....T..A..C..A..C..G..G....A.....A..A..T..G.....G....	:	1300	:		:		:		1300
Z30708.1 | PUUV | N | Russia | M.g. | Udmurtia/338Cg/92 |	:	..T..T..T....C.....A..A.....T....T..A..C..A..C..G..G....A.....A..A..T..G.....G....	:	1300	:		:		:		1300
Z21497.1 | PUUV | N | Russia | M.g. | Udmurtia/894Cg/91 |	:	..T..T..T....C.....A..A.....T....T..A..C..A..C..G..G....A.....A..A..T..G.....G....	:	1300	:		:		:		1300
AB433843.2 | PUUV | N | Russia | M.g. | Samara_49/CG/2005 |	:	..T..T..T....C.....T..A.....C..T..A..C..C....G..G....A.....A..A..T.....G....	:	1300	:		:		:		1300
AB433845.2 | PUUV | N | Russia | M.g. | Samara_94/CG/2005 |	:	..T..T..T....C.....T..A.....C..T..A..C..C....G..G....A.....A..A..T.....G....	:	1300	:		:		:		1300
L11347.1 | PUUV | N | Russia | Human | P360 |	:	..T..T..T....C.....A.....T....T..A..C..A..C..G..G....A.....A..A..T.....G....	:	1300	:		:		:		1300
AB297665.2 | PUUV | N | Russia | M.g. | DTK/Ufa-97 | 1997 |	:	..T..T..T....C.....A.....T....T..A..C..A..C..G..G....A.....A..A..T.....G....	:	1300	:		:		:		1300
M32750.1 | PUUV | N | Russia | M.g. | CG1820 |	:	..T..T..T....C.....A.....T....T..A..C..A..C..G..G....A.....A..A..T.....G....	:	1300	:		:		:		1300
AF442613.1 | PUUV | N | Russia | M.g. | CG17/Baskiria-2001 |	:	..T..T..T....C.....A.....T....T..A..C..A..C..G..G....A.....A..A..T.....G....	:	1300	:		:		:		1300
KX815395.1 | PUUV | N | Poland | M.g. | KS14/118 | 2009 |	:	..T..T..T....C.....C....T....T....T.....G..G..T..A.....A..A..T.....T.....	:	1300	:		:		:		1300
GQ339483.1 | PUUV | N | Sweden | M.g. | Bergsjobo/Mg25/05 |	:	..T..A..A.....C..A.....G..A..T..A..C..A..A..G..A..C..G..G....A..A..A..T.....G....T..G..G..T..	:	1300	:		:		:		1300
AJ223377.1 | PUUV | N | Sweden | M.g. | Solleftea/Cg6/95 |	:	..T..A..A.....C..A.....G..A..T..A..C..A..A..G..A..C..G..G....A..A..A..T.....G....T..G..G..T..	:	1300	:		:		:		1300
GQ339484.1 | PUUV | N | Sweden | M.g. | Faboviken/Mg26/05 |	:	..T..A..A.....C..A..A..G..A..T..G..C..A..A..G.....C..G..G....A..A..A..T.....G....T.....G..T..	:	1300	:		:		:		1300
GQ339485.1 | PUUV | N | Sweden | M.g. | Mangelbo/Mg1/05 |	:	..T..A..A.....C.....A..A..G..A..TT.G..A..C..A..A..C..C....G.....A..A..T.....C.....T.....G..T..	:	1300	:		:		:		1300
GQ339486.1 | PUUV | N | Sweden | M.g. | Munga/Mg2/05 |	:	..T..A..A.....C.....A..A..G..A..TT.G..C..A..A..A..C..C....G.....A..T.....T.....G..T..	:	1300	:		:		:		1300
GQ339487.1 | PUUV | N | Sweden | M.g. | Munga/Mg16/05 |	:	..T..A..A.....C.....A..A..G..A..TT.G..C..A..A..A..C..C....G.....A..T.....T.....G..T..	:	1300	:		:		:		1300
AJ223376.1 | PUUV | N | Sweden | M.g. | Solleftea/Cg3/95 |	:	....A..A.....C..A..A..G..A..T..A.....A..A..G.....C..G..G....A..A..A..T.....G..A..T.....G..T..	:	1300	:		:		:		1300
AF367071.1 | PUUV | N | Russia | M.r. | CRF366 |	:	..T..T..T....C.....AT.G.....G..A.....A..G..A.....G..A.....A..A.....A.....G....	:	1300	:		:		:		1300
AF367064.1 | PUUV | N | Russia | M.g. | CG144 |	:	..T..T..T....C.....AT.G.....G..A.....A..G..A.....G..A.....A..A.....A.....G....	:	1300	:		:		:		1300
AF367065.1 | PUUV | N | Russia | M.g. | CG168 |	:	..T..T..T....C.....A..G.....G..A.....A..G..A.....G..A.....A..A.....A.....G....	:	1300	:		:		:		1300
AF367068.1 | PUUV | N | Russia | M.g. | CG315 |	:	..T..T..T....C.....A..A.....G..A.....A..G..A.....G..A.....A..A.....A.....G....	:	1300	:		:		:		1300
AF367069.1 | PUUV | N | Russia | M.r. | CRF161 |	:	..T..T..T....C.....A..G.....G..A.....A..G..A.....G..A.....A..A.....A.....G....	:	1300	:		:		:		1300

2014.00598	PUUV	N	France	H.s.	59	FOURMIES	: GA	: 1302
2014.00233	PUUV	N	France	H.s.	59	FOURMIES	: ..	: 1302
2014.00097	PUUV	N	France	H.s.	02	SAINT-MICHEL	: ..	: 1302
2014.00488	PUUV	N	France	H.s.	08	SIGNY-LE-PETIT	: ..	: 1302
2014.00613	PUUV	N	France	H.s.	59	FOURMIES	: ..	: 1302
2015.00402	PUUV	N	France	H.s.	08	CHARLEVILLE-MEZIE	: ..	: 1302
2015.00422	PUUV	N	France	H.s.	59	ANOR	: ..	: 1302
2015.00488	PUUV	N	France	H.s.	08	SEDAN	: ..	: 1302
2015.00498	PUUV	N	France	H.s.	08	REMILLY-AILLICOUR	: ..	: 1302
2016.00295	PUUV	N	France	H.s.	08	CORNY-MACHEROMENI	: ..	: 1302
2016.00333	PUUV	N	France	H.s.	59	FOURMIES	: ..	: 1302
2016.00345	PUUV	N	France	H.s.	59	FOURMIES	: ..	: 1302
2016.00357	PUUV	N	France	H.s.	02	HIRSON	: ..	: 1302
2016.00427	PUUV	N	France	H.s.	59	FOURMIES	: ..	: 1302
2016.00469	PUUV	N	France	H.s.	02	PREMONTRE	: ..	: 1302
AJ277075.1	PUUV	N	Belgium	M.g.		Montbliart/CG14444	: ..	: 1302
2014.00053	PUUV	N	France	H.s.	08	SECHEVAL	: ..	: 1302
KT247593.1	PUUV	N	France	M.g.	08	Ardennes/Mg75/201	: ..	: 1302
KT247592.1	PUUV	N	France	M.g.	08	Ardennes/Mg156/20	: ..	: 1302
2015.00019	PUUV	N	France	H.s.	08	ETEIGNIERES	: ..	: 1302
2016.00239	PUUV	N	France	H.s.	08	VIREUX-MOLHAIN	: ..	: 1302
2015.00329	PUUV	N	France	H.s.	08	BOGNY-SUR-MEUSE	: ..	: 1302
2014.00209	PUUV	N	France	H.s.	08	TREMBLOIS-LES-ROC	: A.	: 1302
2015.00456	PUUV	N	France	H.s.	94	ALFORTVILLE	: ..	: 1302
2012.00018	PUUV	N	France	H.s.	08	ROCROI	: A.	: 1302
AJ277032.1	PUUV	N	Belgium	M.g.		Momignies/47Cg/96	: ..	: 1302
AJ277034.1	PUUV	N	Belgium	M.g.		Couvin/59Cg/97	: ..	: 1302
AJ277033.1	PUUV	N	Belgium	M.g.		Momignies/55Cg/96	: ..	: 1302
2012.00638	PUUV	N	France	H.s.	08	GIVET	: ..	: 1302
2015.00328	PUUV	N	France	H.s.	08	VRIGNE-MEUSE	: ..	: 1302
2015.00419	PUUV	N	France	H.s.	08	DOUZY	: ..	: 1302
2016.00310	PUUV	N	France	H.s.	08	THIN-LE-MOUTIER	: ..	: 1302
AJ277030.1	PUUV	N	Belgium	M.g.		Thuin/33Cg/96	: ..	: 1302
AJ238779.1	PUUV	N	Germany	M.g.		NRW/Cg-Erft	: ..	: 1302
2014.00276	PUUV	N	France	H.s.	59	LILLE	: ..	: 1302
U22423.1	PUUV	N	Belgium	M.g.		CG13891	: A.	: 1302
2014.00321	PUUV	N	France	H.s.	59	FOURMIES	: ..	: 1302
2015.00457	PUUV	N	France	H.s.	55	REVIGNY-SUR-ORNAI	: ..	: 1302
2013.00250	PUUV	N	France	H.s.	62	VENDIN-LS-BTHUNE	: A.	: 1302
2016.00282	PUUV	N	France	H.s.	59	MORBECQUE	: ..	: 1302
AJ277076.1	PUUV	N	Belgium	M.g.		Montbliart/CG14445	: ..	: 1302
2014.00153	PUUV	N	France	H.s.	02	BUIRONFOSSE	: ..	: 1302
2014.00171	PUUV	N	France	H.s.	59	SAINT-SAULVE	: ..	: 1302
2016.00293	PUUV	N	France	H.s.	60	LA-NEUVILLE-SUR-R	: ..	: 1302
2014.00499	PUUV	N	France	H.s.	94	CHAMPIGNY-SUR-MAR	: ..	: 1302
2012.00057	PUUV	N	France	H.s.	59	COUSOLRE	: ..	: 1302
2012.00349	PUUV	N	France	H.s.	02	ENGLANCOURT	: ..	: 1302
2014.00135	PUUV	N	France	H.s.	02	ATHIES-SOUS-LAON	: ..	: 1302
2014.00184	PUUV	N	France	H.s.	59	FOURMIES	: ..	: 1302
2016.00182	PUUV	N	France	H.s.	08	BOULZICOURT	: ..	: 1302
2016.00286	PUUV	N	France	H.s.	02	TRUCY	: ..	: 1302
2016.00325	PUUV	N	France	H.s.	59	AULNOYE-AYMERIES	: ..	: 1302
2016.00452	PUUV	N	France	H.s.	02	LAON	: ..	: 1302
2016.00467	PUUV	N	France	H.s.	02	AISNE	: ..	: 1302

2014.00598	PUUV	N	France	H.s.	|59	FOURMIES	: GA	: 1302
2015.00657	PUUV	N	France	H.s.	|02	CILLY	: A.	: 1302
2015.00526	PUUV	N	France	H.s.	|08	MONTHERME	: A.	: 1302
2015.00045	PUUV	N	France	H.s.	|59	FOURMIES	: ..	: 1302
2015.00430	PUUV	N	France	H.s.	|02	MONTCORNET	: ..	: 1302
2016.00311	PUUV	N	France	H.s.	|02	LAON	: ..	: 1302
AJ277031.1	PUUV	N	Belgium	M.g.	|Montbliart/23Cg/96		: ..	: 1302
2016.00326	PUUV	N	France	H.s.	|02	LAON	: ..	: 1302
2016.00353	PUUV	N	France	H.s.	|02	CESSIERES	: ..	: 1302
2012.00061	PUUV	N	France	H.s.	|02	LANISCOURT	: ..	: 1302
2014.00174	PUUV	N	France	H.s.	|02	ST-ERME-OUTRE-ET-	: ..	: 1302
2016.00268	PUUV	N	France	H.s.	|02	PRESLES-ET-THIERN	: ..	: 1302
2015.00660	PUUV	N	France	H.s.	|02	VIC-SUR-AISNE	: ..	: 1302
2012.00025	PUUV	N	France	H.s.	|51	SAINTE-MENEHOULD	: ..	: 1302
2015.00665	PUUV	N	France	H.s.	|51	REIMS	: ..	: 1302
2012.00307	PUUV	N	France	H.s.	|54	COLOMBEY-LES-BELL	: ..	: 1302
2012.00123	PUUV	N	France	H.s.	|55	BAR-LE-DUC	: ..	: 1302
2012.00278	PUUV	N	France	H.s.	|51	REIMS	: ..	: 1302
2015.00185	PUUV	N	France	H.s.	|68	FELLERING	: ..	: 1302
KJ994776.1	PUUV	N	Germany	M.g.	|Mu/07/1219|2007		: ..	: 1302
2012.00086	PUUV	N	France	H.s.	|58	CHEVROCHES	: ..	: 1302
KT247595.1	PUUV	N	France	M.g.	|45	Orleans/Mg29/2010	: ..	: 1302
KT247594.1	PUUV	N	France	M.g.	|45	Orleans/Mg23/2010	: ..	: 1302
KY365004.1	PUUV	N	France	M.g.	|45	Orleans/NCHA373/2	: ..	: 1302
2012.00301	PUUV	N	France	H.s.	|25	MOUTHE	: ..	: 1302
AM695638.1	PUUV	N	France	M.g.	|Mignovillard/CgY02/2		: ..	: 1302
KT247597.1	PUUV	N	France	M.g.	|39	Jura/Mg214/2010	: ..	: 1302
KT247596.2	PUUV	N	France	M.g.	|39	Jura/Mg2/2010	: ..	: 1302
2012.00102	PUUV	N	France	H.s.	|39	COISERETTE	: A.	: 1302
2012.00536	PUUV	N	France	H.s.	|39	LA-PESSE	: A.	: 1302
2014.00622	PUUV	N	France	H.s.	|39	ARBOIS	: ..	: 1302
2015.00567	PUUV	N	France	H.s.	|70	RIOZ	: ..	: 1302
2014.00637	PUUV	N	France	H.s.	|25	SAULES	: ..	: 1302
2012.00396	PUUV	N	France	H.s.	|39	SAINT-CLAUDE	: ..	: 1302
2014.00120	PUUV	N	France	H.s.	|38	LE-MOUTARET	: ..	: 1302
2015.00153	PUUV	N	France	H.s.	|73	GREZY-SUR-ISERE	: ..	: 1302
2015.00504	PUUV	N	France	H.s.	|70	RONCHAMP	: ..	: 1302
2016.00275	PUUV	N	France	H.s.	|21	JALLANGES	: ..	: 1302
2016.00320	PUUV	N	France	H.s.	|25	SAINT-VIT	: ..	: 1302
2015.00410	PUUV	N	France	H.s.	|70	ANGIREY	: ..	: 1302
DQ016430.2	PUUV	N	Germany	M.g.	|Bavaria/CG33/04		: ..	: 1299
DQ016432.2	PUUV	N	Germany	M.g.	|Bavaria/CG41/04		: ..	: 1302
AY954723.2	PUUV	N	Germany	M.g.	|Bavaria-CG34/04		: ..	: 1302
AY954722.2	PUUV	N	Germany	M.g.	|Bavaria-CG9/04		: ..	: 1302
2012.00402	PUUV	N	France	H.s.	|60	GOUVIEUX	: ..	: 1302
2014.00540	PUUV	N	France	H.s.	|60	CHAMBLY	: A.	: 1302
AJ314600.1	PUUV	N	Balkan	M.g.	|Balkan-1		: ..	: 1302
AJ314601.1	PUUV	N	Balkan	M.g.	|Balkan-2		: ..	: 1302
FN377821.1	PUUV	N	Hungary	M.g.	|Mg9/HungaryTR17/00		: ..	: 1302
FN377822.1	PUUV	N	Hungary	M.g.	|Mg23/HungaryTR17/00		: ..	: 1302
GQ339473.1	PUUV	N	Sweden	M.g.	|Kiviniemi/Mg3/05		: AG	: 1302
GQ339474.1	PUUV	N	Sweden	M.g.	|Kiviniemi/Mg5/05		: A.	: 1302
GQ339475.1	PUUV	N	Sweden	M.g.	|Kiviniemi/Mg6/05		: A.	: 1302
GQ339476.1	PUUV	N	Sweden	M.g.	|Aijajarvi/Mg7/05		: AG	: 1302

2014.00598 | PUUV | N | France | H.s. | 59 | FOURMIES | : GA : 1302
GQ339477.1 | PUUV | N | Sweden | M.g. | Aijajarvi/Mg9/05 | : AG : 1302
GQ339478.1 | PUUV | N | Sweden | M.g. | Jockfall/Mg12/05 | : AG : 1302
GQ339482.1 | PUUV | N | Sweden | M.g. | Kalvudden/Mg22/05 | : AG : 1302
GQ339479.1 | PUUV | N | Sweden | M.g. | Moskosel/Mg17/05 | : AG : 1302
GQ339481.1 | PUUV | N | Sweden | M.g. | Ljustrask/Mg20/05 | : AG : 1302
GQ339480.1 | PUUV | N | Sweden | M.g. | Gyttjea/Mg19/05 | : AG : 1302
AY526219.1 | PUUV | N | Sweden | Human | Umea/hu | : AG : 1302
AJ223380.1 | PUUV | N | Sweden | M.g. | Tavelso/Cg81/94 | : AG : 1302
U14137.1 | PUUV | N | Bosnia-H. | M.g. | Vranica | : AG : 1302
AJ223371.1 | PUUV | N | Sweden | M.g. | Huggberget/Cg36/94 | : AG : 1302
Z48586.1 | PUUV | N | Sweden | M.g. | Vindeln/L20Cg/83 | : AG : 1302
AJ223374.1 | PUUV | N | Sweden | M.g. | Mellansel/Cg47/94 | : AG : 1302
AJ223375.1 | PUUV | N | Sweden | M.g. | Mellansel/Cg49/94 | : AG : 1302
AJ238791.1 | PUUV | N | Denmark | M.g. | Fyn/19 | : .. : 1302
AJ278092.1 | PUUV | N | Denmark | M.g. | Fyn47 | : .. : 1302
AJ278093.1 | PUUV | N | Denmark | M.g. | Fyn131 | : .. : 1302
AJ223368.1 | PUUV | N | Norway | M.g. | Eidsvoll/1124v | : .. : 1302
AJ223369.1 | PUUV | N | Norway | M.g. | Eidsvoll/Cg1138/87 | : A. : 1302
JN657228.1 | PUUV | N | Latvia | M.g. | Jelgava/Mg149/2008 | : A. : 1302
KX757839.1 | PUUV | N | Lithuania | M.g. | LT15/164|2015 | : .. : 1302
KX757840.1 | PUUV | N | Lithuania | M.g. | LT15/174|2015 | : .. : 1302
KX815394.1 | PUUV | N | Poland | M.g. | KS13/855|2009 | : .. : 1302
KX757841.1 | PUUV | N | Lithuania | M.g. | LT15/201|2015 | : .. : 1302
AJ314598.1 | PUUV | N | Russia | M.g. | Baltic/49Cg/00 | : .. : 1302
AJ314599.1 | PUUV | N | Russia | M.g. | Baltic/205Cg/00 | : .. : 1302
JN657229.1 | PUUV | N | Latvia | M.g. | Madona/Mg99/2008 | : A. : 1302
JN657232.1 | PUUV | N | Latvia | M.g. | Madona/Mg233/2008 | : A. : 1302
JN657230.1 | PUUV | N | Latvia | M.g. | Jelgava/Mg136/2008 | : .. : 1302
JN657231.1 | PUUV | N | Latvia | M.g. | Jelgava/Mg140/2008 | : .. : 1302
Z30707.1 | PUUV | N | Russia | M.g. | Udmurtia/458Cg/88 | : .. : 1302
Z30706.1 | PUUV | N | Russia | M.g. | Udmurtia/444Cg/88 | : .. : 1302
Z84204.1 | PUUV | N | Russia | M.g. | Kazan | : .. : 1302
Z30708.1 | PUUV | N | Russia | M.g. | Udmurtia/338Cg/92 | : .. : 1302
Z21497.1 | PUUV | N | Russia | M.g. | Udmurtia/894Cg/91 | : .. : 1302
AB433843.2 | PUUV | N | Russia | M.g. | Samara_49/CG/2005 | : .. : 1302
AB433845.2 | PUUV | N | Russia | M.g. | Samara_94/CG/2005 | : .. : 1302
L11347.1 | PUUV | N | Russia | Human | P360 | : .. : 1302
AB297665.2 | PUUV | N | Russia | M.g. | DTK/Ufa-97|1997 | : .. : 1302
M32750.1 | PUUV | N | Russia | M.g. | CG1820 | : .. : 1302
AF442613.1 | PUUV | N | Russia | M.g. | CG17/Baskiria-2001 | : .. : 1302
KX815395.1 | PUUV | N | Poland | M.g. | KS14/118|2009 | : A. : 1302
GQ339483.1 | PUUV | N | Sweden | M.g. | Bergsjobo/Mg25/05 | : AG : 1302
AJ223377.1 | PUUV | N | Sweden | M.g. | Solleftea/Cg6/95 | : AG : 1302
GQ339484.1 | PUUV | N | Sweden | M.g. | Faboviken/Mg26/05 | : A. : 1302
GQ339485.1 | PUUV | N | Sweden | M.g. | Mangelbo/Mg1/05 | : .. : 1302
GQ339486.1 | PUUV | N | Sweden | M.g. | Munga/Mg2/05 | : .. : 1302
GQ339487.1 | PUUV | N | Sweden | M.g. | Munga/Mg16/05 | : .. : 1302
AJ223376.1 | PUUV | N | Sweden | M.g. | Solleftea/Cg3/95 | : A. : 1302
AF367071.1 | PUUV | N | Russia | M.r. | CRF366 | : A. : 1302
AF367064.1 | PUUV | N | Russia | M.g. | CG144 | : A. : 1302
AF367065.1 | PUUV | N | Russia | M.g. | CG168 | : A. : 1302
AF367068.1 | PUUV | N | Russia | M.g. | CG315 | : A. : 1302
AF367069.1 | PUUV | N | Russia | M.r. | CRF161 | : A. : 1302

2014.00598|PUUV|N|France|H.s.|59|FOURMIES| : GA : 1302
AF367070.1|PUUV|N|Russia|M.r.|CRF308| : A. : 1302
AF367066.1|PUUV|N|Russia|M.g.|CG215| : A. : 1302
AF367067.1|PUUV|N|Russia|M.g.|CG222| : A. : 1302
Z46942.1|PUUV|N|Finland|M.g.|Puumala/1324Cg/79| : A. : 1302
Z30702.1|PUUV|N|Finland|M.g.|Evo/12Cg/93| : A. : 1302
Z30703.1|PUUV|N|Finland|M.g.|Evo/13Cg/93| : A. : 1302
Z30704.1|PUUV|N|Finland|M.g.|Evo/14Cg/93| : A. : 1302
Z30705.1|PUUV|N|Finland|M.g.|Evo/15Cg/93| : A. : 1302
Z69985.1|PUUV|N|Finland|M.g.|Virrat/25Cg/95| : A. : 1302
JN831947.1|PUUV|N|Finland|Pieksamaki/human_lung/20| : A. : 1302
JN831943.1|PUUV|N|Finland|Pieksamaki/Mg7/2008| : A. : 1302
JN831950.1|PUUV|N|Finland|Pieksamaki/human_kidney/| : A. : 1302
JQ319166.1|PUUV|N|Finland|Konnevesi/Mg_O14B/2005| : A. : 1302
JQ319169.1|PUUV|N|Finland|Konnevesi/Mg_O27B/2005| : A. : 1302
JQ319167.1|PUUV|N|Finland|Konnevesi/Mg_O15B/2005| : A. : 1302
JQ319164.1|PUUV|N|Finland|Konnevesi/Mg_O6B/2005| : A. : 1302
JQ319165.1|PUUV|N|Finland|Konnevesi/Mg_O9B/2005| : A. : 1302
JQ319170.1|PUUV|N|Finland|Konnevesi/Mg_O74B/2005| : A. : 1302
JQ319171.1|PUUV|N|Finland|Konnevesi/Mg_M114B/2005| : A. : 1302
AJ238788.1|PUUV|N|Russia|M.g.|Karhumaki| : A. : 1302
AJ238789.1|PUUV|N|Russia|M.g.|Kolodozero| : A. : 1302
AJ314597.1|PUUV|N|Finland|M.g.|Pallasjarvi/63Cg/98| : A. : 1302
NC_005224.1|PUUV|N|Finland|M.g.|Sotkamo-revu-NCBI2| : A. : 1302
AJ238790.1|PUUV|N|Russia|M.g.|Gomselga| : A. : 1302
AB010731.1|Hokkaido-V|N|Japan|M.r.|Tobetsu-60Cr-93| : .. : 1302
AB010730.1|Hokkaido-V|N|Japan|M.r.|Kamiiso-8Cr-95| : .. : 1302
JX046487.1|Muju-V|N|South-Korea|M.r.|11-5|2011| : A. : 1302
JX046484.1|Muju-V|N|South-Korea|M.r.|11-4|2011| : A. : 1302
JX028273.1|Muju-V|N|South-Korea|M.r.|11-1|2011| : A. : 1302
DQ138128.1|Muju-V|N|South-Korea|E.r.|00-18| : AG : 1302
DQ138140.1|Muju-V|N|South-Korea|E.r.|99-27| : AG : 1302
DQ138133.1|Muju-V|N|South-Korea|E.r.|96-1| : AG : 1302
DQ138142.1|Muju-V|N|South-Korea|E.r.|99-28| : AG : 1302

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