

Table S3. Antibody V,D and J genes and alleles of NA-specific human antibodies

Antibody	Sequence ID	V-GENE	J-GENE	D-GENE	CDR3 length	Total	Silent	Replacement
A	EM-3C02H	IGHV3-33*01 F	IGHJ4*02 F	IGHD6-19*01 F	13	1	0	1
A	EM-3C02K	IGKV1-393*01 F	IGKJ5*02 F		8	2	1	1
B	70-5F01	IGHV3-69*01 F	IGHJ3*02 F	IGHD1-26*01 F	23	19	3	16
B	70-5F01	IGKV3-11*01 F	IGKJ4*01F		8	4	0	4
C	1009-3A02H	IGHV1-69*01 F	IGHJ6*02 F	IGHD1-1*01 F	19	19	5	14
C	1009-3A02K	IGKV1-33*01 F	IGKJ4*01 F		9	11	4	7
D1	1000-3B04H	IGHV7-4-1*02 F	IGHJ4*02 F	IGHD2-15*01 F	14	12	6	6
D1	1000-3B04K	IGKV1-5*01 F	IGKJ1*01 F		8	6	0	6
D2	1000-3B06	IGHV7-4-1*02 F	IGHJ4*02 F	IGHD2-2*01 F	14	11	6	5
D2	1000-3B06	IGKV1-5*01 F	IGKJ1*01 F		8	3	0	3
E	1000-2F04	IGHV4-4*02 F	IGHJ4*02 F	IGHD3-3*01 F	13	15	1	14
E	1000-2F04	IGKV1-5*01 F	IGKJ1*01 F		9	7	2	5
F	1000-1D05	IGHV3-30*03 F	IGHJ6*03 F	IGHD3-10*01 F	15	15	1	14
F	1000-1D05	IGKV1-5*01 F	IGKJ4*01 F		10	13	2	11
G	1000-3C05H	IGHV4-34*01 F	IGHJ6*03 F	IGHD5-24*01 ORF	18	9	2	7
G	1000-3C05K	IGKV3-11*01 F	IGKJ4*01 F		7	4	3	1