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## **Supplemental Information**

### **A Dual-Functioning 5'-PPP-NS1shRNA that Activates a RIG-I Antiviral Pathway and Suppresses Influenza NS1**

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1 **Supplementary Table 1. Sequence for target (NS1) sense strand.** The sequence of NS gene  
2 segment from 12 different influenza viruses were aligned to find most conserved regions in NS  
3 gene segment that can serve as target sense sequence in 5'ppp NS1shRNA.

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shRNA #	Sequence for Target Sense	Size (mer)	Position	=100% Match	<100% Match
1	<b>GTGATGCCCCATTCTTGA</b>	19	109	1-12	0
2	TGCAAG <b>C</b> TT <b>T</b> CAGGTAGA	19	43	1-6,10-12	7, 8, 9
3	GTGATGCCCCATTCTTGA <b>T</b> CGGCT	25	109	1-10	11,12
4	<b>T</b> GAGGATGTCAAAAATGCA	19	539	1-11	12
5	GTCCTCATCGG <b>A</b> GG <b>A</b> CTTGAATGGAAT	27	564	1-3,6-8,10-12	5, 4, 9
6	CTTGAATGGAAT <b>G</b> A <b>A</b> TACAC	20	579	2,5-11	1, 4, 3, 12
7	TAACAC <b>A</b> GTTCGAGT <b>C</b> ACT	19	593	2-10	1, 11
8	ACAGAGATT <b>C</b> ACTTGG <b>A</b> GAA	20	620	1-6,8-11	7, 12
9	ATAAAAA <b>A</b> CACCCTTGTT <b>T</b> CTACT	24	867	1-10	11,12

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7 The following viruses were used: A/New York/4870/2009 (H1N1) – Pandemic; A/Puerto  
8 Rico/8/34 (H1N1) – Lab strain; A/WSN/1933 (H1N1) – Lab strain; A/New Jersey/8/1976  
9 (H1N1) – Epidemic strain; A/Texas/36/1991 (H1N1) – Seasonal strain; A/X-31 (H3N2) –  
10 Lab strain; A/Aichi/2/1968 (H3N2) – Seasonal strain; A/Wisconsin/67/2005 (H3N2) –  
11 Seasonal strain; A/Panama/2007/1999 (H3N2) – Seasonal strain; A/Singapore/1/1957  
12 (H2N2) – Pandemic strain; A/Thailand/SP83/2004 (H5N1) – Pathogenic avian influenza  
13 strain; A/Hong Kong/485/1997 (H5N1) – Highly Pathogenic avian strain.

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