

Table S4. List of All Non-Synonymous and Synonymous Mutations Identified During Sequential Transmission Experiments with A/Texas/50/2012(H3N2)

Gene Segment	Nucleotide Change	Amino Acid Change Relative to Inoculum [for HA, (H3 numbering)]	Nucleotide Frequencing														
			Nucleotide Frequencing														
			Virus Inoculum	Trio 1: DI 9291->RC1 9292-> RC2 9293			Trio 2: DI 9297-> RC1 9298-> no transmission to RC2			Trio 3: DI 9306-> RC1 9307-> RC2 9308			Trio 4: DI 9309-> RC1 9310-> RC2 9311			Trio 5: DI 9314-> no transmission to RC1	
DI	RC1	RC2		DI	RC1	RC2	DI	RC1	RC2	DI	RC1	RC2	DI	RC1	RC2		
<b>H3N2 Amino Acid Mutations/ Non-Synonymous Mutations</b>																	
PB2	C47G	T16S											10.61				
PB2	G85A	A29T											7.34				
PB2	A124G	N42D								11.01							
PB2	A148G	M50V									71.01						
PB2	C176A	A59D														24.92	
PB2	G297T	W99C															
PB1	T305C	I102T		7.54	7.98												
PB1	G1978A	V660I								41.06							
PB1	A2213G	E738G															
PB1	A2270G	K657R											10.56				35.77
PA	G224A	R75K															
PA	G892A	E298K								9.58							
PA	G1135A	V379I															
PA	G1882A	V628M															6.24
PA	T1894C	S632P															
HA	A123G	I41M (25)															
HA	G460T	A154S (138)			46.99												
HA	C516A	H172Q (156)															
HA	C543A	N181K (165)			19.47												
HA	T626A	F209Y (193)			8.44												
HA	T725A	I242N (226)	38.13	52.93													
HA	G1321A	A441T (425)				18.85											
NP	G707A	R236K		10.96													
NP	G1122A	M374I															
NP	A1150G	R384G															
NA	A16T	K6*			21.74												
NA	C95T	T32I								100							
NA	G451A	D151N				5.53											
NA	T1097A	I366N			8.1												
NA	G1135T	V379F			7.49												
NA	T1162G	S388A		27.15													
NA	G1283A	R428K															73.89
NS	C254T	P85L															17.39
NS	A796C	S266R		6.02	91.56	100	8.43			6.32							11.83
<b>H3N2 Synonymous Mutations</b>																	
PB2	G1482A	V494		7.5													
PB2	C2067T	A689			74.31	99.78											
PB1	C588A	T196											14.42				
PB1	G1161A	K387			19.73												
PB1	C2143T	L415			96.54	99.77											
PB1	G1806A	R602								25.11							
PB1	T1875C	C625					6.14										
PB1	C2016T	R672									9.57						

PB1	A2181G	R727															
PA	G1551A	V517															
HA	G795A	G265 (249)															
NP	T141A	L47	6.86		97.07	100.00											
NP	T141C	L47															
NP	G447A	Q149						5.41				22.99					
NP	C558A	I186	18.45														
NP	G1065A	R355						6.48									
NS	A93T	P31				100.00											
NS	C150T	L50											5.40				
NS	T204C	I68							9.09								
NS	G324A	K108											6.00				
														5.58		7.30	

Notes:  
Displayed are mutations detected at a frequency  $\geq$  5%