

Table S6. Summary of mutations in antigenic sites of the HA and NA during sequential transmission

Protein	Nucleotide Change	Amino Acid Change Relative to Inoculum (for HA, (H3 numbering))	Virus Inoculum	Nucleotide Frequencing																	
				Trio 1: DI 5456			Trio 2: DI 6361-RC1 6362-RC2			Trio 3: DI 6364-RC1 6365-RC2			Trio 4: DI 6382-RC1 6383-RC2			Trio 5: DI 6385-RC1 6386-RC2			Trio 6: DI 6389-RC1 6390-RC2		
				DI	RC1	RC2	DI	RC1	RC2	DI	RC1	RC2	DI	RC1	RC2	DI	RC1	RC2	DI	RC1	RC2
H1N1pdm09																					
HA	A424G	N142D (129)	25.31																		
HA	G719A	R240Q (226)		93.29			94.84	100	100	94.39	100	100	96.5	100	100	97.35	100	99.79	97.78	100	99.79
H3N2																					
HA	C516A	H172Q (156)					8.38									13.6					
HA	T626A	F209Y (193)			8.44																
HA	T725A	I242N (226)	38.13	52.93			36.23	98.62								9.18					
H3N8																					
HA	G433A	G145R (129)													100.00	99.55					
HA	A725G	Q242R (226)																		99.39	
H7N9																					
HA	G452A	G151E (133)	4.38	9.79			11.14			5.96			10.53			8.13			5.95	68.03	
HA	G499A	D167N (158)	31.59	36.72			41.31			28.73			38.22			28.18			30.34	94.82	
HA	T704A	L235Q (226)		21.10			32.13			25.97			26.68	99.11	98.89	23.73	99.55	98.64	9.91		

Notes:

No antigenic changes were observed in NA for any of the viruses.

Grey shading denotes the animal did not become infected.

For H3N2, the last trio of ferrets was removed from all analyses as the RC1 had a false positive antigen test (see discussion).