

Table S3. Amino acid substitutions defining CIV lineages originating from avian hosts (H3N2), equine hosts (H3N8), and swine hosts (CIV-H1N1).

Segment	CIV-H3N2	CIV-H3N8	CIV-H1N1
PB2	I147T		
	M365I		
	M570V		
PB1	L218V/I		
	S361N		
	I517V		
	M744V		
PA	S/A65Y/H M/T/V441K/R	N675D	F35L
	T26A S61N	N70K [£] N/K99S	A/V14T
HA	D/E/G97N		
	D188N [§]		
	W238L/F [¶]		
	H451N/K		
	D505N		
	L512V		
NP	M159L		
	T/A373K		
	A428T		
	N/S473K		
NA	M24L		
	E54K		
	K/E82V/I		
	N/D/G129S/I		
	G359E/D		
	S372L R432G		
MP			
NS*	A/S/T/E60I		
	R/Q/D67W		
	E75K		
	D/N/G139E		
	E/D152N		

[¶]Ca site [£]Cb site [§]Sb site *All mutations occur in the NS1 coding region