viruses	relative receptor binding avidity
A/Texas/50/2012-WT	++
A/Texas/50/2012-N128A	++
A/Texas/50/2012-A138S	+++
A/Texas/50/2012-R142G	++
A/Texas/50/2012-N144S+N145S	++
A/Texas/50/2012-N145S	+++
A/Texas/50/2012-F159S	+
A/Texas/50/2012-N225D	+++
A/Switzerland/9715293/2013	+++

Table S1: Mutant viral panel and receptor binding avidities, related to Table 2. Shown are the reverse genetics-derived mutant panel that we created for our antigenic analyses. Relative receptor binding avidity is also shown (+++ indicates virus was able to agglutinate red blood cells treated with > 1.0 ug/mL RDE; ++ indicates virus was able to agglutinate red blood cells treated with 0.5-1.0 ug/mL RDE; + indicates virus was able to agglutinate red blood cells treated with <0.5 ug/mL RDE). Data are representative of 2 independent experiments.

	A/Texas/50/2012-WT	A/Texas/50/2012-F159S
human ID 06	640	80
human ID 14	1280	80
human ID 20	640	<40
human ID 21	320	40
human ID 22	640	160
human ID 23	320	80
human ID 31	320	80
ferret anti-A/Texas/50/2012	1280	40

Table S2: *In vitro* neutralization titers using sera isolated from vaccinated humans and infected ferrets, related to Table 2 and Table 3. *In vitro* neutralization assays were completed using sera isolated 21 days following vaccination of humans with the 2014-2015 influenza vaccine or sera isolated 19 days following infection of ferrets with the A/Texas/50/2012 strain. Data are representative of 2 independent assays.