

1 Table S1. Hemagglutination inhibition, neutralization assay, and viral shedding results for all experiments.

Virus	Replicate	DI					RC1					RC2				
		Animal No.	HAI Titer	MN Titer	Shed Virus	Defined as Infected ^a	Animal No.	HAI Titer	MN Titer	Shed Virus	Defined as Infected ^a	Animal No.	HAI Titer	MN Titer	Shed Virus	Defined as Infected ^a
H1N1 pdm09	1	5456	640	403	Yes	Yes	5458	320	16	No	Yes					n/a
	2	6361	320	160	Yes	Yes	6362	2560	453	Yes	Yes	6363	5120	640	Yes	Yes
	3	6364	640	806	Yes	Yes	6365	2560	320	Yes	Yes	6366	5120	254	Yes	Yes
	4	6382	1280	1016	Yes	Yes	6383	2560	905	Yes	Yes	6384	5120	508	Yes	Yes
	5	6385	1280	1016	Yes	Yes	6386	10240	453	Yes	Yes	6388	5120	905	Yes	Yes
	6	6389	1280	2560	Yes	Yes	6390	10240	1280	Yes	Yes	6391	2560	1016	Yes	Yes
H7N9	1	7090	320	160	Yes	Yes	7091	40	<10	No	No					n/a
	2	7094	320	320	Yes	Yes	7095	<10	<10	No	No					n/a
	3	7097	320	113	Yes	Yes	7098	40	25	No	Yes					n/a
	4	6811	160	202	Yes	Yes	7077	320	80	Yes	Yes	7092	320	40	Yes	Yes
	5	ARC 1196	80	80	Yes	Yes	ARC 1197	160	63	Yes	Yes	7096	160	40	Yes	Yes
	6	7078	160	160	Yes	Yes	7080	160	226	Yes	Yes	7081	<10	<10	No	No
H3N2	1	9291	1280	2032	Yes	Yes	9292	640	2032	Yes	Yes	9293	1280	5120	Yes	Yes
	2	9297	1280	3225	Yes	Yes	9298	640	2560	Yes	Yes	9299	<10	<10	No	No
	3	9306	1280	>5120	Yes	Yes	9307	640	2560	Yes	Yes	9308	2560	3620	Yes	Yes
	4	9309	640	1810	Yes	Yes	9310	1280	4064	Yes	Yes	9311	1280	4064	Yes	Yes
	5	9314	640	2032	Yes	Yes	9315	<10	<10	No	No	9316	<10	<10	No	No
H3N8	1	A8701	320	640	Yes	Yes	A8702	<10	<10	No	No	A8703	<10	<10	No	No
	2	A8704	640	1016	Yes	Yes	A8705	640	1810	Yes	Yes	A8706	320	508	Yes	Yes
	3	A8707	640	1016	Yes	Yes	A8708	640	1016	Yes	Yes	A8709	320	905	Yes	Yes
	4	A8712	320	640	Yes	Yes	A8713	320	254	Yes	Yes	A8714	160	254	Yes	Yes
	5	A8251	320	453	Yes	Yes	A8252	320	905	Yes	Yes	A8253	<10	<10	No	No
	6	A7717	320	905	Yes	Yes	A8258	640	2032	Yes	Yes	A8285	160	508	Yes	Yes

2 Notes:

3 Grey boxes denote RC2 was not introduced (H1N1 and H7N9 studies) or RC2 was housed with an RC1 that did not
4 become virus positive by antigen test strip or q-RT-PCR (H3N2 and H3N8).

5 Underline denotes RC1 ferrets that did not become virus positive by antigen test strip or q-RT-PCR, but were moved 2
6 days after the last RC1 ferret became positive in other replicates.

7 ^a Animals were defined as infected if virus was cultured from the nasal wash and/or animals had reciprocal titers >10 for
8 both hemagglutination inhibition (HI) and microneutralization assays (MN).

9