

**Novel H5 recombinant protein vaccine provides effective protection against H5N1
influenza virus in cats**

Supplementary Table 1. Clinical signs used to calculate the clinical score index

Days post challenge	Cat ID	Hunched posture	Ruffled fur (piloerection)	Not eating or drinking	>15% body weight loss	Neurological symptoms (hind-limb paralysis)	Total score
		(3 points)	(3 points)	(2 points)	(10 points)	(10 points)	28
1	C1	3	3	0	0	0	6
	C3	3	0	0	0	0	3
	C4	3	3	0	0	0	6
	C6	3	0	0	0	0	3
	C7	3	0	0	0	0	3
	C8	3	3	0	0	0	6
	C11	3	3	0	0	0	6
	C16	3	3	0	0	0	6
2	C1	3	3	0	0	0	6
	C3	3	3	0	0	0	6
	C4	3	3	2	0	0	8
	C6	3	3	2	0	0	8
	C7	3	3	2	0	0	8
	C8	3	3	2	0	0	8
	C11	3	3	2	0	0	8
	C16	3	3	2	0	0	8
3	C1	3	3	2	0	0	8
	C3	3	3	0	0	0	6
	C4	3	3	0	0	0	6
	C6	3	3	2	0	0	8
	C7	3	3	2	0	0	8
	C8	3	3	2	0	0	8
	C11	3	3	0	0	0	6
	C16	3	3	2	0	0	8
4	1	3	3	2	0	0	8
	3	3	3	0	0	0	6
	4	3	3	2	0	0	8
	6	3	3	0	0	0	6
	7	3	3	2	0	0	8
	8	3	3	0	0	0	6
	11	3	3	2	0	0	8
	16	3	3	2	0	0	8

5	1	3	3	2	0	0	8
	3	3	3	0	0	0	6
	4	3	3	2	0	0	8
	6	3	3	2	0	0	8
	7	3	3	2	0	0	8
	8	3	3	2	0	0	8
	11	3	3	2	0	0	8
	16	3	3	2	0	0	8
6	1	3	3	2	0	0	8
	3	3	3	2	0	0	8
	4	3	3	2	0	0	8
	6	3	3	2	0	0	8
	7	3	3	2	0	0	8
	8	3	3	2	10	0	18
	11	3	3	2	10	0	18
	16			2	10	0	12
7	1	3	3	2	10	0	18
	3	3	3	2	0	0	8
	4	3	3	2	0	0	8
	6	3	3	2	10	0	18
	7	3	3	2	0	0	8
	8	3	3	2	10	0	18
	11	3	3	2	10	0	18
	16	3	3	2	10	0	18
8	C1	3	3	2	10	0	18
	C3	3	3	2	0	0	8
	C4	3	3	2	10	0	18
	C7	3	3	2	10	10	28
	C8	3	3	2	10	0	18
9	C1	3	3	2	10	0	18
	C3	3	3	0	0	0	6
	C4	3	3	2	10	0	18
10	C3	3	3	0	0	0	6
14	C3	3	0	0	0	0	3

Supplementary Table 2. Nucleotide similarity of hemagglutinin gene sequences

Isolates	H5-vaccine (A2)	First *HPAI H5N1 in #NA (Unassigned)	Challenge (B3.13)
First *HPAI H5N1 in #NA (Unassigned)	99.30	--	--
Challenge (B3.13)	98.94	99.65	--
Heterologous (D1.1)	98.24	98.77	98.42

North America

* Highly pathogenic avian influenza