

**Table S2. Summary of long-term storage test in this study**

Lineage	Clade	Strain	Storage period at 4°C (month)					
			0			12		
			Reactivity (HAU threshold)		Identification	Reactivity (HAU threshold)		Identification
$\alpha$ 2,3Sia strip	$\alpha$ 2,6Sia strip	$\alpha$ 2,3Sia strip	$\alpha$ 2,6Sia strip					
Group 1	H1N1	A/Suita/117/2011	–	+ (32)	Human	–	+ (32)	Human
	H5N1	A/duck/Egypt/D1Br/2007 (EG/D1	+ (32)	–	Bird	+ (32)	–	Bird
		rEG/D1	+ (32)	–	Bird	+ (32)	–	Bird
		rEG/D1 <sub>Q192H</sub>	+ (32)	+ (128)	Dual	+ (32)	+ (128)	Dual
	rEG/D1 <sub>128Δ/1151T</sub>	+ (32)	+ (128)	Dual	+ (32)	+ (128)	Dual	
Group 2	H3N2	A/Japan/434/2003	–	–	un	–	–	un

Abbreviations: +, positive result; –, negative result; Human, Human-type receptor specificity; Bird, Bird-type receptor specificity; Dual, Dual receptor affinity; un, unknown.

Same batch of test strips were used to evaluate the stability and reproductivity of the strip test.

HAU threshold is the lowest HAU titer at which positive result was detected in the strip test.