



## Real-Time PCR Kit for AIV A, H5, H7, H9 and H5N1

### Quantitative & Definitive result for AIV confirmation in the Laboratory

#### Why ANIGEN Real-Time AIV PCR Detection Kit?

1. High Sensitivity: Each ANIGEN Real-Time PCR Detection Kit provides highly effective pathogen detection in a sample material
2. High Specificity: ANIGEN ownnig optimal & unique primers and probes system guarantees a highly specific result
3. Excellent reproducibility
4. Quantitative Analysis
5. Complete result within 2 hours
6. Higher detection limit than general PCR : 1,000 times more sensitive
7. Simple test procedures
8. ANIGEN Real-Time PCR Detection Kits contain all component for detection of AIV or NDV from sample
9. Feces, cloaca, and organ homogenates samples are recommended

#### Practical use of AIV Real-Time PCR Detection Kit

1. To confirm a doubtful serological result
2. To confirm AIV infection in birds with slight clinical signs (even 1 day post-infection)
3. To check disinfection efficiency.

### List of ANIGEN AIV Real-Time PCR Kits

Cat. No.	Product	Diagnosis	Detector
PD65-01	AIV Real-Time PCR Kit	AIV Type A	TaqMan probe, FAM dye
PD65-02	AIV H5 Real-Time PCR Kit	AIV H5 subtype	TaqMan probe, FAM dye
PD65-03	AIV H7 Real-Time PCR Kit	AIV H7 subtype	TaqMan probe, FAM dye
PD65-04	AIV H9 Real-Time PCR Kit	AIV H9 subtype	TaqMan probe, FAM dye
PD65-16	AIV H5/N1 Real-Time PCR Kit	AIV H5 & N1 subtype	TaqMan probe, FAM dye
PD65-17	AIV Type A/H5 Real-Time PCR Kit	AIV type A & H5 subtype	TaqMan probe, FAM dye
PD65-18	AIV Type A/H7 Real-Time PCR Kit	AIV type A & H7 subtype	TaqMan probe, FAM dye
PD65-19	AIV Type A/H9 Real-Time PCR Kit	AIV type A & H9 subtype	TaqMan probe, FAM dye

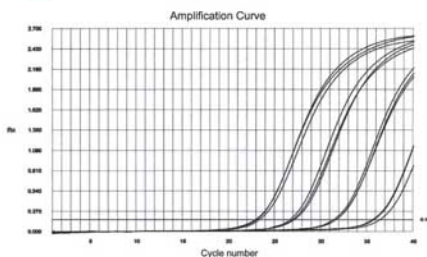
### Materials in ANIGEN Real-Time PCR Detection Kits

No	Content	No	Content
1	Detection Solution 800ul x 1 vial	6	Standard 1 (1x10 <sup>4</sup> copies/ul) 200ul x 1 vial
2	PCR enzyme mix 100ul x 1 vial	7	Standard 2 (1x10 <sup>5</sup> copies/ul) 200ul x 1 vial
3	RT mix 100ul x 1 vial	8	Standard 3 (1x10 <sup>6</sup> copies/ul) 200ul x 1 vial
4	RNase free Water 500ul x 1 vial	9	Standard 4 (1x10 <sup>7</sup> copies/ul) 200ul x 1 vial
5	ROX reference dye*(optional) 0.4 ul x 1 vial	10	Instruction of use



# Real-Time PCR Kit for AIV A, H5, H7, H9 and H5N1

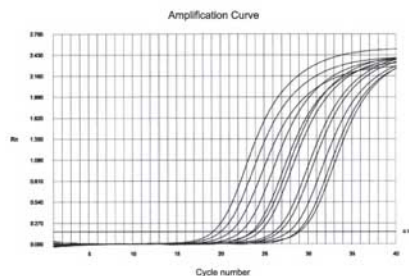
## Reproducibility



Standard	SD	CV(%)
Standard 1x10 <sup>4</sup>	0.16	0.4
Standard 1x10 <sup>5</sup>	0.15	0.5
Standard 1x10 <sup>6</sup>	0.23	0.8
Standard 1x10 <sup>7</sup>	0.22	1.0

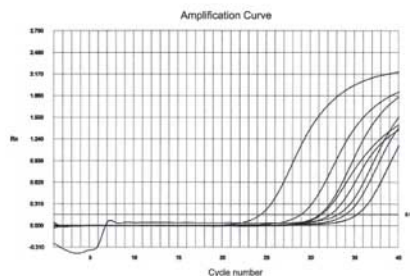
## Detection Limit

Virus Titer (H9N2, 10 <sup>3.5</sup> EID <sub>50</sub> /0.1 ml)	Immuno Assay	AIV Real-Time PCR
10 <sup>4</sup> , 10 <sup>3.5</sup> EID <sub>50</sub> /0.1ml	Positive	Positive
10 <sup>4</sup> , 10 <sup>3</sup> EID <sub>50</sub> /0.1ml	Positive	Positive
10 <sup>4</sup> , 10 <sup>2.5</sup> EID <sub>50</sub> /0.1ml	Negative	Positive
10 <sup>4</sup> , 10 <sup>2</sup> EID <sub>50</sub> /0.1ml	Negative	Positive
10 <sup>4</sup> , 10 <sup>1.5</sup> EID <sub>50</sub> /0.1ml	Negative	Positive
10 <sup>4</sup> , 10 <sup>1</sup> EID <sub>50</sub> /0.1ml	Negative	Positive
10 <sup>4</sup> , 10 <sup>0.5</sup> EIC <sub>50</sub> /0.1ml	Negative	Negative
10 <sup>4</sup> , 10 <sup>0</sup> EIC <sub>50</sub> /0.1ml	Negative	Negative



## Detection in tissue

Sample No	Organ	Immuno Assay	AIV Real-Time PCR
Sample 1	intestine	+	+
	kidney	-	+
	trachea	+/-	+
Sample 2	intestine	+	+
	kidney	-	+
	trachea	+	+
Sample 3	intestine	+/-	+
	kidney	-	+
	trachea	+/-	+



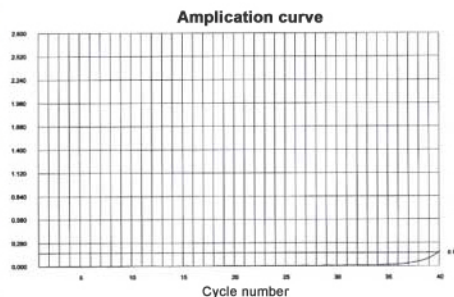


## Real-Time PCR Kit for AIV A, H5, H7, H9 and H5N1

### Specificity

Sample	Immunoassay	AIV Real-Time PCR
Sample 1	-	-
Sample 2	-	-
Sample 3	-	-
Sample 4	-	-
Sample 5	-	-
Sample 6	-	-
Sample 7	-	-
Sample 8	-	-
Sample 9	-	-
Sample 10	-	-
Sample 11	-	-
Sample 12	-	-
Sample 13	-	-
Sample 14	-	-

(+ : positive, - : Negative)



### Serotype Validation

Serotype	Type A	H5	H7	H9
A/PR/8/34 (H1N1)	+	-	-	-
A/Singapore/1/57 (H2N2)	+	-	-	-
A/Duck/Ukraine/1/57 (H3N8)	+	-	-	-
A/Duck/Czechoslovakia/56 (H4N6)	+	-	-	-
A/Duck/ Hong Kong /820/80 (H5N3)	+	+	-	-
A/Shearwater/Australia/1/72 (H6N5)	+	-	-	-
A/Duck/Hong Kong/301/78 (H7N1)	+	-	+	-
A/Turkey/Ontario/6118/68 (H8N4)	+	-	-	-
A/Turkey/Wisconsin/1/66 (H9N2)	+	-	-	+
A/Chick/Germany/N/49 (H10N7)	+	-	-	-
A/Duck/England/56 (H11N6)	+	-	-	-
A/Duck/Alberta/60/76 (H12N5)	+	-	-	-
A/Gull/Maryland/704/77 (H13N6)	+	-	-	-
A/Mallard/Gurjev/263/82 (H14N5)	+	-	-	-
A/Shearwater/West Australia/2576/79 (H15N9)	+	-	-	-

(+ : positive, - : Negative)

### Compatible Real-Time PCR Apparatus

- Perkin Elmer  
ABI prism series (7000/7700/7900HT)  
ABI Real Time PCR system (7300/7500)
- Corbett : Rotor-gene
- BioRad : iCycler, Chromo4, Dyad Disciple cycler
- Roche Applied Science : LightCycler
- etc. : Compatible with general Real time PCR include Stratagene, Bioneer Exicycler