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Influenza A and B Virus Recombinant Monoclonal Antibodies

GeneTex has expanded its already extensive reagent catalog for influenza virus research with a series of recombinant rabbit monoclonal antibodies targeting the influenza A virus (FLUAV) and influenza B virus (FLUBV) nucleoproteins (NPs). These high-quality antibodies are validated for use in lateral flow assay (LFA; Figure 1), and the recommended LFA pairs are listed in Tables 1-2.

Influenza A Virus

Influenza B Virus

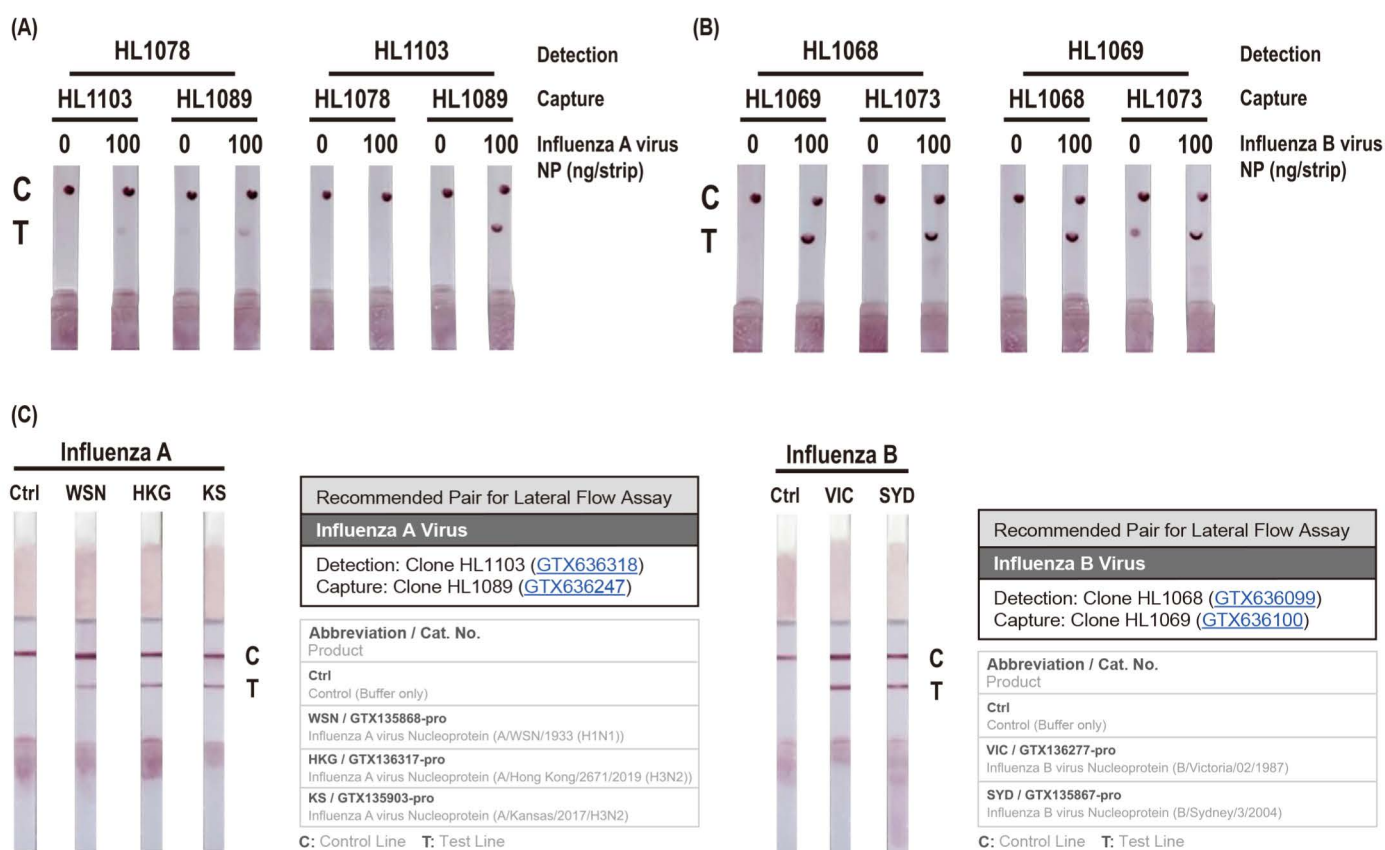


Figure 1. Detection of FLUAV and FLUBV NPs in lateral flow assays.

Recombinant NPs derived from influenza A virus (A) and influenza B virus (B) were detected by lateral flow assay using the indicated recombinant rabbit monoclonal antibody pairs. HL1078: Influenza A virus Nucleoprotein antibody [HL1078] ([GTX636199](#)); HL1089: Influenza A virus Nucleoprotein antibody [HL1089] ([GTX636247](#)); HL1103: Influenza A virus Nucleoprotein antibody [HL1103] ([GTX636318](#)); HL1068: Influenza B virus Nucleoprotein antibody [HL1068] ([GTX636099](#)); HL1069: Influenza B virus Nucleoprotein antibody [HL1069] ([GTX636100](#)); HL1073: Influenza B virus Nucleoprotein antibody [HL1073] ([GTX636194](#)); Sample: Influenza A virus Nucleoprotein (NP) (A/WSN/1933 (H1N1)), DDDDK Tag ([GTX135868-pro](#)); Sample: Influenza B virus Nucleoprotein (NP) (B/Sydney/3/2004), DDDDK Tag ([GTX135867-pro](#)). (C) Detection of FLUAV or FLUBV NPs by lateral flow assay is further confirmed using the indicated recombinant rabbit monoclonal antibody pairs.



Table 1. The FLUAV Antibody Pair for Lateral Flow Assay

Detection	Capture
Clone HL1103 (GTX636318)	Clone HL1089 (GTX636247)

Table 2. The FLUBV Antibody Pair for Lateral Flow Assay

Detection	Capture
Clone HL1068 (GTX636099)	Clone HL1069 (GTX636100)

In addition, the antibodies are available as matched pairs for sandwich ELISA (sELISA) with sensitivities in the low picomolar range and superior EC50 values compared to other market-leading clones (Figure 2).

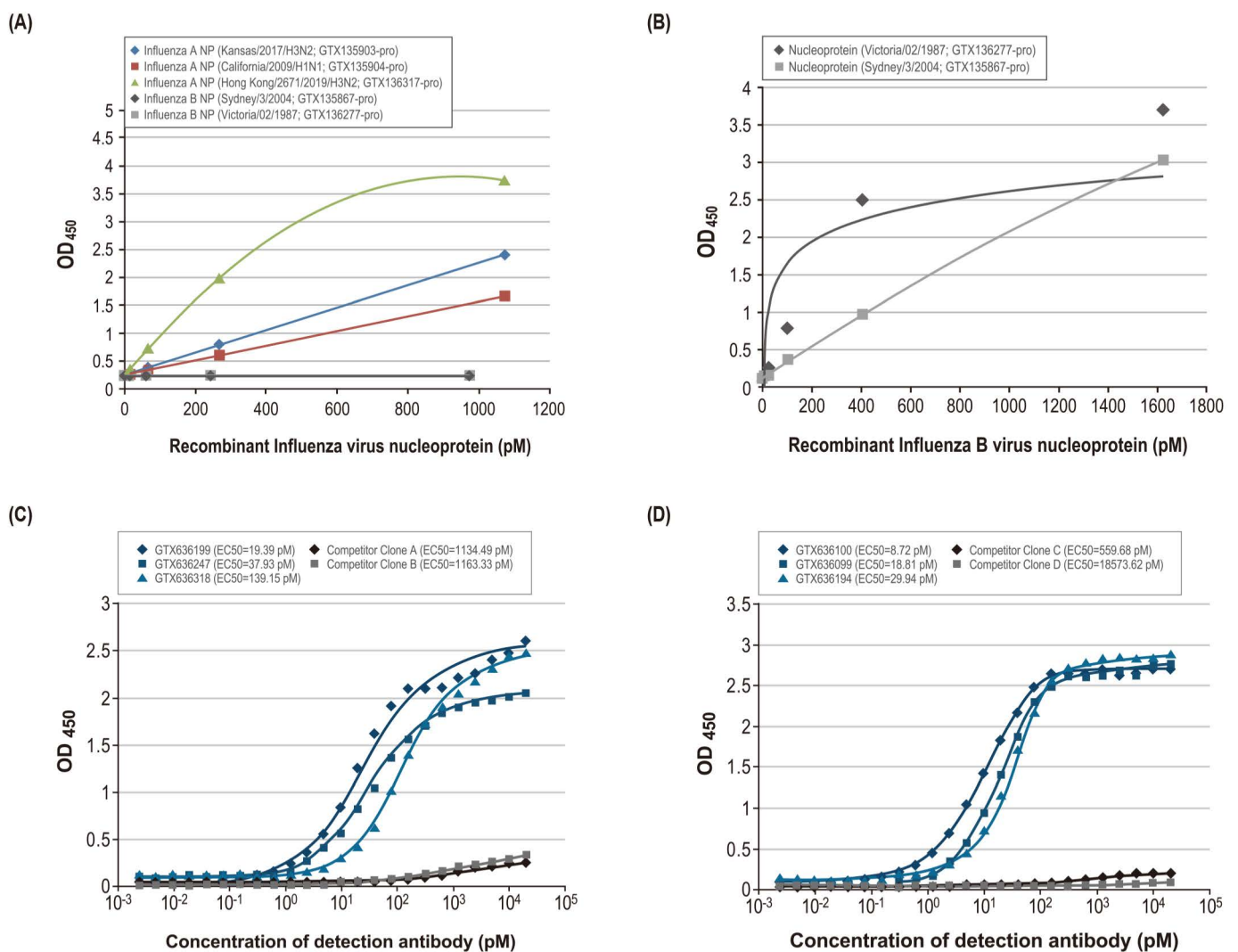


Figure 2. Detection of FLUAV and FLUBV NPs in ELISA assays.

Recombinant NPs derived from different strains of influenza A virus and influenza B virus were assayed by sELISA using (A) FLUAV NP antibodies [GTX636318](#) and [GTX636247](#) (as a pair), or (B) FLUBV NP antibodies [GTX636099](#) and [GTX636100](#) (as a pair). Indirect ELISA demonstrates the superior EC50 values of (C) FLUAV NP antibodies [GTX636199](#), [GTX636247](#), and [GTX636318](#), as well as of (D) FLUBV NP antibodies [GTX636100](#), [GTX636099](#), and [GTX636194](#), compared to a competitor's clones.



Importantly, at least sixteen FLUAV strains and nine FLUBV strains can be detected by ELISA, western blot and immunocytochemistry, including FLUAV H1N1 and H3N2 subtypes (Figure 3). These recombinant antibodies showed higher sensitivities compared to the competitor's clones (Figure 4). This data demonstrates the potential value of these recombinant antibodies for diagnostic applications.

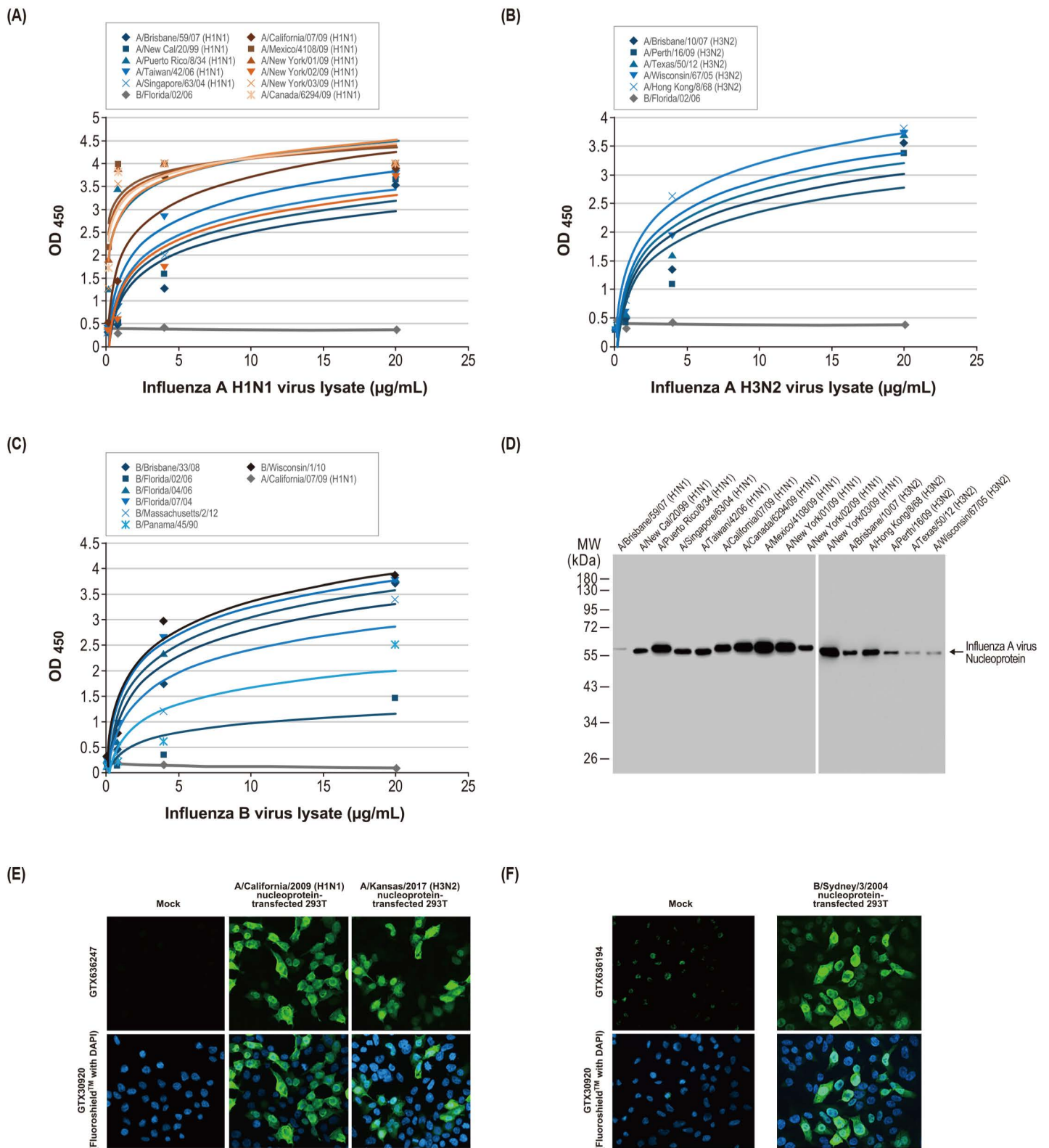


Figure 3. Analysis of influenza virus strains.

Sandwich ELISA detects NPs in lysates from cells infected with different strains of (A) influenza A virus subtype H1N1 or (B) subtype H3N2 using FLUAV NP antibodies GTX636318 and GTX636247 (as a pair), or (C) influenza B virus using FLUBV NP antibodies GTX636099 and GTX636100 (as a pair). (D) The FLUAV NP antibody GTX636199 recognizes NPs of various FLUAV subtypes in infected-cell lysates by western blot. (E-F) Immunocytochemistry using FLUAV NP antibody GTX636247 (E) or FLUBV NP antibody GTX636194 (F) on NP gene-transfected 293T cells.

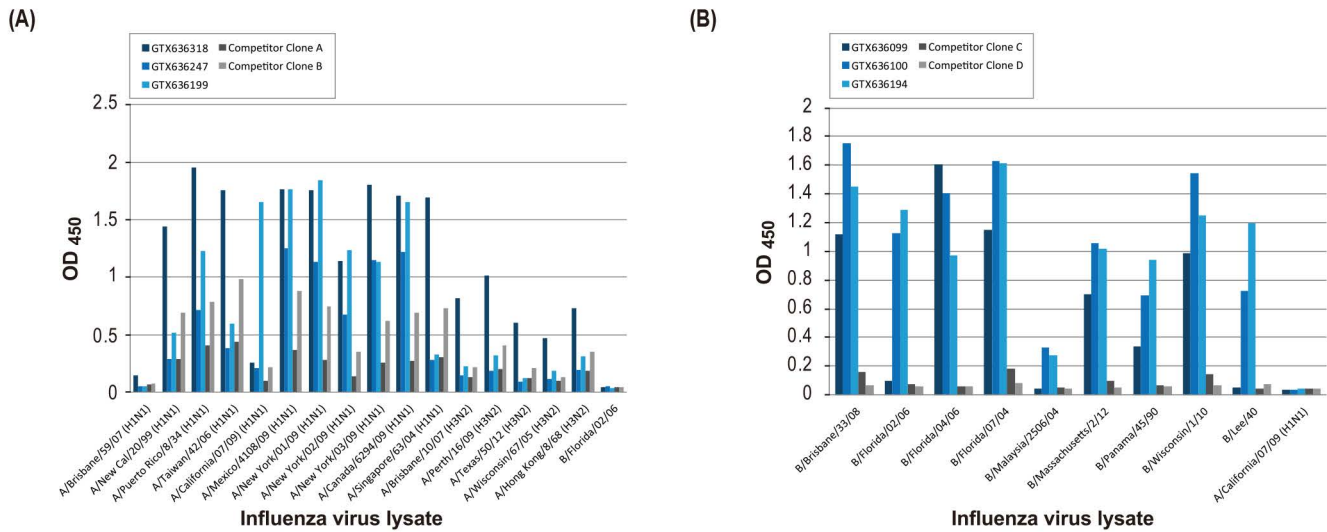


Figure 4. Comparison of GeneTex recombinant antibodies and market-leading clones.

Indirect ELISA assays exhibit the comparative sensitivities of (A) FLUAV NP antibodies [GTX636318](#), [GTX636247](#), and [GTX636199](#), as well as of (B) FLUBV NP antibodies [GTX636099](#), [GTX636100](#), and [GTX636194](#), compared to a competitor's clones.

A complete list of applications is shown below for each featured recombinant protein and antibody (Tables 3-4).











Table 3. Featured recombinant proteins and antibodies for FLUAV research

Cat. No.	Product Name	Clonality	Applications
GTX135903-pro	Influenza A virus Nucleoprotein protein (A/Kansas/2017/H3N2), DDDDK Tag	N/A	ELISA
GTX135904-pro	Influenza A virus Nucleoprotein protein (A/California/2009 (H1N1)), DDDDK Tag	N/A	ELISA
GTX136317-pro	Influenza A virus Nucleoprotein protein (A/Hong Kong/2671/2019 (H3N2)), DDDDK Tag	N/A	ELISA
GTX135868-pro	Influenza A virus Nucleoprotein protein (A/WSN/1933 (H1N1)), DDDDK Tag	N/A	ELISA, Sandwich ELISA
GTX629633	Influenza A virus Nucleoprotein antibody [GT1236]	Ms mAb	WB, ICC/IF, IHC-P, ELISA, Sandwich ELISA
GTX629544	Influenza A virus Nucleoprotein antibody [GT778]	Ms mAb	WB
GTX636199	Influenza A virus Nucleoprotein antibody [HL1078]	Rb mAb	WB, ICC/IF, ELISA, Sandwich ELISA
GTX636247	Influenza A virus Nucleoprotein antibody [HL1089]	Rb mAb	WB, ICC/IF, ELISA, Sandwich ELISA
GTX636282	Influenza A virus Nucleoprotein antibody [HL1098]	Rb mAb	WB, ICC/IF, ELISA, Sandwich ELISA
GTX636318	Influenza A virus Nucleoprotein antibody [HL1103]	Rb mAb	WB, ICC/IF, ELISA, Sandwich ELISA
GTX125989	Influenza A virus Nucleoprotein antibody	Rb pAb	WB, ICC/IF, IHC-P, IP, ELISA, Sandwich ELISA
GTX127357	Influenza A virus H1N1 HA (Hemagglutinin) antibody	Rb pAb	WB, ICC/IF, IHC-P, ELISA
GTX629750	Influenza A virus H1N1 HA (Hemagglutinin) antibody [GT223]	Ms mAb	WB, ICC/IF
GTX629746	Influenza A virus H1N1 HA (Hemagglutinin) antibody [GT521]	Ms mAb	WB
GTX125974	Influenza A virus H1N1 NA (Neuraminidase) antibody	Rb pAb	WB
GTX629696	Influenza A virus H1N1 NA (Neuraminidase) antibody [GT288]	Ms mAb	WB, ICC/IF
GTX127363	Influenza A virus H3N2 HA (Hemagglutinin) antibody	Rb pAb	WB, IHC-P
GTX632358	Influenza A virus H5N1 HA (Hemagglutinin) antibody [1D10]	Ms mAb	WB, ICC/IF
GTX127984	Influenza A virus H5N1 NA (Neuraminidase) antibody	Rb pAb	WB
GTX127303	Influenza A virus H7N7 HA (Hemagglutinin) antibody	Rb pAb	WB
GTX127302	Influenza A virus H7N7 HA (Hemagglutinin) antibody	Rb pAb	WB
GTX127307	Influenza A virus H9N2 HA (Hemagglutinin) antibody	Rb pAb	WB
GTX125928	Influenza A virus M1 (Matrix protein) antibody	Rb pAb	WB, ICC/IF






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Table 3. Featured recombinant proteins and antibodies for FLUAV research

Cat. No.	Product Name	Clonality	Applications
 GTX127356	Influenza A virus M1 (Matrix protein) antibody	Rb pAb	WB, ELISA
 GTX125951	Influenza A virus M2 (Matrix protein) antibody	Rb pAb	WB, ICC/IF
 GTX125990	Influenza A virus NS1 (Nonstructural protein 1) antibody	Rb pAb	WB, ICC/IF, IHC-P
 GTX633685	Influenza A virus NS1 (Nonstructural protein 1) antibody [GT1653]	Ms mAb	WB
 GTX125953	Influenza A virus NS2 (Nonstructural protein 2/NEP) antibody	Rb pAb	WB, ICC/IF
 GTX125952	Influenza A virus NS2 (Nonstructural protein 2/NEP) antibody	Rb pAb	WB
 GTX118991	Influenza A virus PA protein antibody	Rb pAb	WB, ICC/IF
 GTX125932	Influenza A virus PA protein antibody	Rb pAb	WB, ICC/IF
 GTX125923	Influenza A virus PB1 protein antibody	Rb pAb	WB, ICC/IF
 GTX125926	Influenza A virus PB2 protein antibody	Rb pAb	WB, ICC/IF

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Table 4. Featured recombinant proteins and antibodies for FLUBV research

Cat. No.	Product Name	Clonality	Applications
GTX135867-pro	Influenza B virus Nucleoprotein (B/Sydney/3/2004), DDDDK Tag	N/A	ELISA
GTX136277-pro	Influenza B virus Nucleoprotein (B/Victoria/02/1987), DDDDK Tag	N/A	ELISA
 GTX636099	Influenza B virus Nucleoprotein antibody [HL1068]	Rb mAb	WB, ICC/IF, ELISA, Sandwich ELISA
 GTX636100	Influenza B virus Nucleoprotein antibody [HL1069]	Rb mAb	WB, ICC/IF, ELISA, Sandwich ELISA
 GTX636194	Influenza B virus Nucleoprotein antibody [HL1073]	Rb mAb	WB, ICC/IF, ELISA, Sandwich ELISA
GTX629882	Influenza B virus Nucleoprotein antibody [GT371]	Ms mAb	WB, ICC/IF, ELISA, Sandwich ELISA
GTX629883	Influenza B virus Nucleoprotein antibody [GT382]	Ms mAb	WB, ICC/IF, ELISA, Sandwich ELISA
 GTX128538	Influenza B virus Nucleoprotein antibody	Rb pAb	WB, ICC/IF, ELISA, Sandwich ELISA
 GTX128539	Influenza B virus Nucleoprotein antibody	Rb pAb	WB, ICC/IF, ELISA, Sandwich ELISA
GTX135819	Influenza B virus Nucleoprotein antibody	Rb pAb	WB
GTX128543	Influenza B virus Hemagglutinin (HA) antibody	Rb pAb	WB, ICC/IF
GTX128542	Influenza B virus Hemagglutinin (HA) antibody	Rb pAb	WB, ICC/IF
GTX128537	Influenza B virus M (Matrix protein) antibody	Rb pAb	WB, ICC/IF
GTX128536	Influenza B virus M (Matrix protein) antibody	Rb pAb	WB
GTX128541	Influenza B virus Neuraminidase (NA) antibody	Rb pAb	ICC/IF
GTX128540	Influenza B virus Neuraminidase (NA) antibody	Rb pAb	ICC/IF

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