

Influenza Virus Products

A brief overview of Influenza virus

Influenza viruses are negative-sense single-stranded RNA (ssRNA) viruses that make up four of the seven genera of the family *Orthomyxoviridae*. These viruses are only distantly related to the human parainfluenza viruses, which are RNA viruses belonging to the paramyxovirus family. It divided into four families of influenza viruses: A, B, C, and D. Three of the four types of influenza viruses affect humans: Type A, Type B, and Type C. Most of the epidemics and outbreaks of flu are caused by types A and B, with type C being generally responsible for sporadic mild upper respiratory symptoms. Type D has not been known to infect humans, but is believed to have the potential to do so.

Pathogenesis of Influenza virus infection

Influenza viruses have spherical or filamentous shapes with an envelope, containing glycoproteins and a single-stranded RNA gene. The two most important glycoproteins over the outer layer of the flu virus are hemagglutinin (H or HA) and neuraminidase (N or NA). Both of them have important roles in the pathogenesis of the disease. For example, the influenza A genome contains 11 genes on eight pieces of RNA, encoding for 11 proteins: hemagglutinin (HA), neuraminidase (NA), nucleoprotein (NP), M1 (matrix 1 protein), M2, NS1 (non-structural protein 1), NS2 (another name is NEP, nuclear export protein), PA, PB1 (polymerase basic 1), PB-1 F2 and PB2. HA is a lectin that mediates binding of the virus to target cells and entry of the viral genome into the target cell, while NA is involved in the release of progeny virus from infected cells, by cleaving sugars that bind the mature viral particles. influenza viruses bind through HA onto sialic acid sugars on the surfaces of epithelial cells, typically in the nose, throat, and lungs of mammals.

Influenza Virus related Proteins and Antibodies

• Recombinant Proteins

Product name	Protein domain	Species	Expression system	Tagging	Purity	Endotoxin Test	Bioactivity	Cat No.
H1N1/HA	18-344aa	Human Influenza A	Baculovirus	His	>90%	P	NA	ATGP1484
BEST H3N2/HA	17-345aa	Human Influenza A	Baculovirus	His	>90%	P	NA	ATGP1481
	18-344aa	Canine Influenza A	Baculovirus	His	>95%	P	NA	ATGP1488
	18-344aa	Canine Influenza A	Baculovirus	His	>90%	P	NA	ATGP3799
H5N1/HA	17-338aa	Avian Influenza A	Baculovirus	His	>90%	P	NA	ATGP1497
BEST Mx1	1-662aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP2826
MX2	626-715aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP2514(D)
BEST Podoplanin/PDPN	99-207aa	H	<i>E.coli</i>	His	>95%	NA	NA	PDP0801
uCK2	1-261aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP0804
CPSF4	1-244aa	H	<i>E.coli</i>	His	>85%	NA	NA	ATGP2023(D)
HERC5	681-1024aa	H	<i>E.coli</i>	His	>90%	NA	NA	ATGP2671(D)
Glycophorin A	20-91aa	H	Baculovirus	hlgG-His	>85%	P	NA	ATGP3592

• Monoclonal Antibodies

Product name	Clone No.	Applications	Isotype	Host	Cat No.
H1N1/HA	AT1G7	ELISA, WB	IgG _{1,k}	M	ATGA0221
	AT1G7 (TCS)	ELISA, WB	IgG _{1,k}	M	ATGA0561
H3N2/HA	AT1B7	ELISA, WB	IgG _{1,k}	M	ATGA0224
	AT1B7 (TCS)	ELISA, WB	IgG _{1,k}	M	ATGA0535
BEST H5N1/HA	AT2B7	ELISA, WB	IgG _{1,k}	M	ATGA0220
	AT2B7 (TCS)	ELISA, WB	IgG _{1,k}	M	ATGA0522
Podoplanin/PDPN	AT56F7	ELISA, WB, ICC/IF	IgG _{1,k}	M	ATGA0418
	5E2	ELISA, WB, FACS, ICC/IF	IgG _{2b,k}	M	APD0833
	5E2 (TCS)	ELISA, WB, FACS, ICC/IF	IgG _{2b,k}	M	ATGA0571

TCS: Tissue culture supernatant H: Human M: Mouse R: Rat P: Pass NA: Not Analyzed D: Denatured form