H5N1 Antibody (VN04-2) - 200-301-975

Code: 200-301-975 **Size:** 100 µg

Product Description: H5N1 Antibody (VN04-2) - 200-301-975

Concentration: 1.0 mg/mL by UV absorbance at 280 nm

PhysicalState: Liquid (sterile filtered)

Label	Unconjugated
Host	Mouse
Gene Name	HA
Species Reactivity	virus
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Stabilizer	None
Preservative	0.01% (w/v) Sodium Azide
Storage Condition	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Synonyms	H5HA antibody, Hemagglutinin 5 antibody, H5N1 antibody
Application Note	Hemagglutinin of A/Vietnam/1203/04 Influenza Virus (VN04-2) monoclonal antibody can be used for hemagglutination inhibition (HI) assays to provide antigenic characterization of the influenza A viruses of the H5 HA subtype. This monoclonal antibody is suitable for virus neutralization assays (in cell culture and in embryonated chicken eggs), ELISA, immunoprecipitation, immunohistochemistry and western blotting.
Background	Hemagglutinin of A/Vietnam/1203/04 Influenza Virus (VN04-2) Antibody raised against the hemagglutinin (HA) surface glycoprotein of the A/Vietnam/1203/04 (H5N1) influenza virus. Generally referred to as "bird flu", the H5N1 influenza A virus has been documented in poultry and humans across ten Eurasian countries, from Japan in the north to Indonesia in the south. Without immunity, humans would have no protection against H5N1 influenza viruses, which could potentially cause a catastrophic pandemic influenza. This antibody, directed against the HA surface glycoprotein of the A/Vietnam/1203/04 (H5N1) influenza virus, is intended to further our understanding of the mechanisms underlying antigenic variation and evolution of novel variants. The major functions of HA include receptor-binding and fusion activities, but there may also be a structural role for HA in viral particle formation. Following attachment of HA to surface receptors on susceptible cells, the influenza virus enters the cell via endocytosis and membrane fusion.
Purity And Specificity	This product was purified from tissue culture supernatant fluid by Protein A chromatography and is specific for H5 hemagglutinin (HA) protein of influenza A virus [strain A/Vietnam/1203/04 (H5N1)]. VN04-2 monoclonal antibody did not cross-react with influenza viruses of other HA subtypes. This monoclonal antibody reacted with H5N1 influenza viruses representatives of different clades and subclades of the H5 HA subtype.
ELISA	1:5,000
Immunohistochemistry	User Optimized
WESTERN BLOT	User Optimized
IHC	User Optimized
NEUTRALIZATION	User Optimized
Expiration	Expiration date is one (1) year from date of opening.
Immunogen	A/Vietnam/1203/04 Influenza Virus (VN04-2) antibody was produced by intraperitoneal immunization of BALB/c mice with concentrated purified virus preparation containing hemagglutinin (HA) protein of influenza A virus [strain A/Vietnam/1203/04 (H5N1)] using the modification of the method described by Kohler and Milstein. Each mouse received two immunizations of 15 µg HA with incomplete Freund's adjuvant, administered 3 week apart.
General Reference	Guan, Y., et al. (2004) H5N1 Influenza: A Protean Pandemic Threat. Proc. Natl. Acad. Sci. U.S.A. 101: 8156–8161. Li, K. S., et al. (2004) Genesis of a Highly Pathogenic and Potentially Pandemic H5N1 Influenza Virus in Eastern Asia. Nature 430: 209–213. Stevens, J., et al. (2006) Structure and Receptor Specificity of the Hemagglutinin from an H5N1 Influenza Virus. Science 312: 404–410.

Hatta, M., et al. (2001) Molecular Basis for High Virulence of Hong Kong H5N1 Influenza A Viruses. Science 293: 1840–1842.

Webster, R.G., et al. (1980) The Mechanism of Antigenic Drift in Influenza Viruses: Analysis of Hong Kong (H3N2) Variants with Monoclonal Antibodies to the Hemagglutinin Molecule. Ann NY Acad Sci. 354:142-161.

Related Products

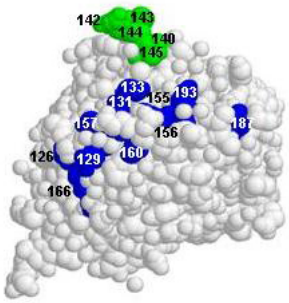
009-001-310	IL-6 Human Recombinant Protein - 009-001-310
009-001-B93	IL-4 Human Recombinant Protein - 009-001-B93
010-001-310	IL-6 Mouse Recombinant Protein - 010-001-310
610-4302	Anti-MOUSE IgG (H&L) (RABBIT) Antibody Peroxidase Conjugated - 610-4302

Related Links

NCBI - 58618437	http://www.ncbi.nlm.nih.gov/nuccore/58618437
NCBI - 159144921	http://www.ncbi.nlm.nih.gov/protein/159144921
UniProt - A8UDQ2	http://www.uniprot.org/uniprot/A8UDQ2

Images

1	Schematic representation of the antigenic sites and the epitopes on the globular head of the HA H5 HA molecule. Images were created with RasMol 2.6, and the HA structure was obtained from the Protein Data Bank (PDB accession number 1JSM). Amino acid positions are designated in H3 numbering. Image provided courtesy of Elena Govorkova Ph D.



2	Shown are titers of Rockland anti H5N1 antibodies against a variety of H5N1 influenza viruses .

Cross reactivity of anti-A/Vietnam/1203/2004 (H5N1) HA monoclonal antibodies with H5N1 influenza viruses in HI assay.

HA Clade	H5N1 Influenza Virus	HI titers with anti-HA monoclonal antibodies:					
		VN04-2	VN04-8	VN04-9	VN04-10	VN04-13	VN04-16
H5 Ref.	A/Tern/South Africa/61	100	<	<	<	<	<
North American	A/Chicken/Pennsylvania/1370/83	3200	<	25600	200	3200	<
	A/Mallard/ Pennsylvania/10218/84	800	<	200	6400	25600	400
	A/Chicken/Hidalgo/28159-2332/94	<	<	200	100	1600	<
	A/Mallard/Arkansas/1/2001	1600	<	200	400	3200	100
Clade 0	A/Hong Kong/156/97	6400	<	25600	6400	25600	400
	A/Hong Kong/481/97	6400	<	1600	1600	12800	100
	A/Duck/Singapore/3/97	200	<	200	800	6400	200
	A/Goose/Hong Kong/437-4/99	6400	<	6400	1600	6400	200
Clade 1	A/Vietnam/1194/2004	3200	1600	12800	3200	6400	1600
	A/Vietnam/1203/2004	6400	1600	12800	3200	6400	1600
	A/Vietnam/HN30408/2005	6400	3200	3200	3200	6400	1600
	A/Hong Kong/213/2003	6400	3200	400	3200	800	3200
ade 2.1.2	A/Indonesia/6/2005	3200	<	800	25600	200	6400
	A/Indonesia/5/2005	<	<	400	12800	200	3200
ade 2.1.3	A/Chicken/Indonesia/PA03/2003	800	3200	200	3200	1600	1600
	A/Duck/HUNWG/1504/2004	1600	<	3200	1600	<	400
	A/Duck/GXLA/1304/2004	<	1600	<	3200	1600	1600
	A/Chicken/Jogjakarta/BBVET/IX/2004	100	<	100	3200	3200	400
	A/Chicken/Malang/BBVET/IV/2004	3200	3200	<	3200	3200	1600
lade 2.2	A/Whooper swan/Mongolia/244/2005	<	1600	<	3200	1600	1600
	A/Turkey/15/2006	100	<	<	3200	<	400
	A/Bar headed goose/Qinghai/1A/2005	100	6400	<	6400	12800	3200
ade 2.3.4	A/Duck/Hunan/15/2004	1600	<	3200	1600	<	400
	A/Duck/Laos/3295/2006	<	<	400	1600	100	100
	A/Chicken/Malaysia/935/2006	100	<	400	800	100	100
	A/Common magpie/Hong Kong/645/2006	<	<	200	400	<	100
lade 2.4	A/Duck/Guangxi/13/2004	<	1600	<	3200	1600	1600

nagglutination-inhibition (HI) testing was performed with 0.5% chicken red blood cells by standard method. < - less than 1:100.

Disclaimer

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