



official distributor

SZABO-SCANDIC HandelsgmbH
Quellenstraße 110, A-1100 Wien
T. +43(0)1 489 3961-0
F. +43(0)1 489 3961-7
mail@szabo-scandic.com
www.szabo-scandic.com

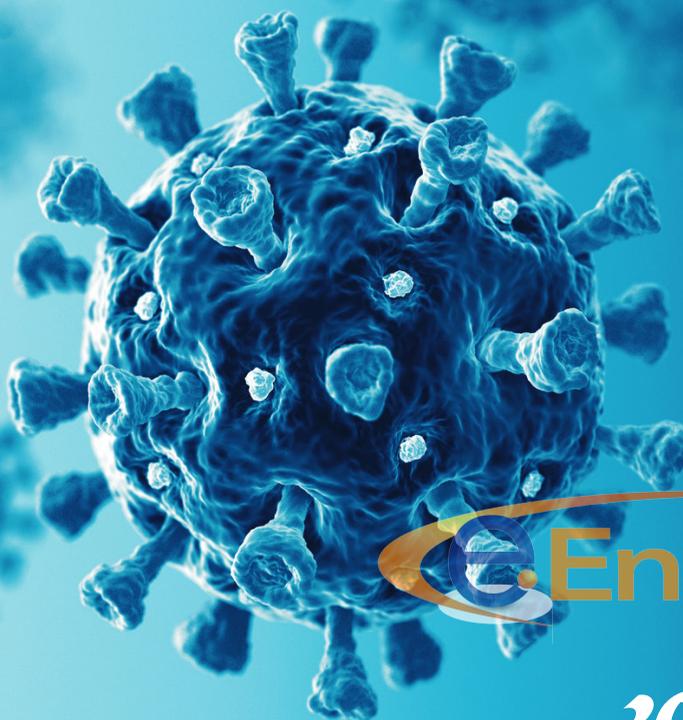


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INFECTIOUS DISEASE REAGENTS

Antigens-Antibodies-Assays



2023-2024

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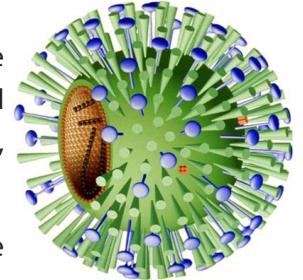
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INFLUENZA VIRUS RESEARCH TOOLS

1. INFLUENZA A/B

Influenza viruses belong to the family Orthomyxoviridae. The viral particles are about 80-120 nm in diameter and can be spherical or pleomorphic. Their lipid membrane envelope contains two glycoproteins: hemagglutinin (HA) and neuraminidase (NA). These two proteins determine the subtypes of Influenza A virus. There are 18 H subtypes and 11 N subtypes known, but only H1, H2, H3, and N1, N2 are commonly found in humans.

HA is the major surface antigen of the influenza viruses, against which neutralizing antibodies are elicited during virus infection and vaccination. The single polypeptide HA is subsequently cleaved into two polypeptides, HA1 and HA2. The HA1 polypeptide mutates more frequently than HA2, and plays a crucial role in natural selection.



The Influenza A viral genome consists of eight single negative-strand RNAs that can range between 890 and 2340 nucleotides long, encoding for 11 proteins: hemagglutinin (HA), neuraminidase (NA), nucleoprotein (NP), M1, M2, NS1 (non-structural protein 1), NS2 (nuclear export protein), PA, PB1 (polymerase basic 1), PB1-F2 and PB2.

Influenza B viruses are not divided into subtypes, but can be further broken down into lineages and strains. Currently circulating influenza B viruses belong to one of two lineages: B/Yamagata and B/Victoria.

1.1. Influenza A virus research products

H1N1			
<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/Brisbane/02/2018 (H1N1)	HA1 (aa 18-343) protein	C-terminal 6x his tag	IA-H1-B18P
	HA (aa 18-529) protein	C-terminal 6x his tag	IA-H1-B18WP
	HA (Y98F)(aa 18-529)	c-Myc + 6x his tag	IA-H1-B18Wpm
A/Brisbane/59/2007 (H1N1)	HA1 (aa 18-343) protein	C-terminal 6x his tag	IA-0012-005P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-0012W-005P
	Anti-HA antibody	pAb, rabbit IgG	IA-BR59-0100
	Anti-HA antibody, clone IT-8F8	mAb, mouse IgG1	MIA-0019
	HA ELISA assay kit	Sandwich ELISA, 96-well	CA-I157
A/California/04/2009 (H1N1)	HA (aa 1-530) protein	N-terminal hFc-tag	IA-H1-005P
	M1 matrix protein	C-terminal 6x his tag	IA-M1-023P
	NS1 protein	C-terminal 6x his tag	IA-NS1-021P
	Anti-HA (aa 200-250)	pAb, rabbit IgG	IA-H1-CA2
	Anti-HA (aa 400-500)	pAb, rabbit IgG	IA-H1-CA3
	HA full-length cDNA clone	ORF cDNA clone	HA-1005
	HA1 (aa 18-344) protein	C-terminal 6x his tag	IA-01SW-005P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-11SW-005P
A/California/06/2009 (H1N1)	HA (aa 18-530) protein, trimer	C-terminal 6x his tag	IA-H1-11SWt
	Anti-HA antibody	pAb, rabbit IgG	IA-01SW-0100
	Anti-HA antibody, clone IT-096	mAb, mouse IgG1	MIA-0013
	Anti-HA antibody, clone IT-26D11	mAb, mouse IgG1	MIA-0014

INFLUENZA VIRUS RESEARCH TOOLS

<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/California/06/2009 (H1N1)	Anti-M1 antibody	pAb, rabbit IgG	IA-036-0100
	Anti-M2 antibody	pAb, rabbit IgG	IA-M2-B81
	Anti-NA antibody	pAb, rabbit IgG	IA-038-0100
	Anti-NS1 antibody	pAb, rabbit IgG	IA-037-0100
A/California/07/2009 (H1N1)	HA1 (aa 18-345) protein	C-terminal 6x his tag	IA-01SW-12P
	HA (aa 18-529) protein	C-terminal 6x his tag	IA-SW-12P
	M1 (aa 1-252) protein	C-terminal 6x his tag	IA-M1-C19P
	Anti-HA1 Antibody	pAb, rabbit IgG	IA-HA1-007
	HA full-length cDNA clone	ORF cDNA clone	HA-C359
	HA ELISA assay kit	Sandwich ELISA, 96-well	CA-I179
A/Hawaii/70/2019 (H1N1)	HA (aa 18-530) protein	C-terminal 6x his tag	IA-H1-H19WP
A/Guangdong-Maonan/ SWL1536/2019 (H1N1)	HA (aa 18-530) protein	C-terminal 6x his tag	IA-H1-GM19WP
	HA (Y98F)(aa 18-530) protein	c-Myc + 6xhis tag	IA-H1-GM19Wpm
A/Michigan/45/2015 (H1N1)	HA (aa 18-529) protein	C-terminal 6x his tag	IA-H1-M15WP
	Neuraminidase	C-terminal 6x his tag	IA-NA-M15P
	Anti-HA antibody, clone IT-3A10	mAb, mouse IgG2a	MIA-H1-M015
A/New Caledonia/20/99 (H1N1)	HA1 (aa 18-345) protein	C-terminal 6x his tag	IA-001-005P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-001W-005P
	Anti-HA1 antibody	pAb, rabbit IgG	IA-001-0100
	Anti-HA antibody	pAb, rabbit IgG	IA-NC20-0100
	Anti-HA antibody, clone 4	mAb, mouse IgG1	MIA-H1-004
	Anti-HA antibody, clone 20	mAb, mouse IgG1	MIA_H1-102
	Anti-HA antibody, clone IT-3455	mAb, mouse IgG1	MIA-0017
	Anti-HA antibody, clone IT-3430	mAb, mouse IgG2a	MIA-0018
	Anti-HA antibody, clone IT-010	mAb, mouse IgG1	MIA-0011
	Anti-HA antibody, clone IT-015	mAb, mouse IgG1	MIA-0012
	Anti-multiple HA antibody	pAb, rabbit IgG	IA-011-0100
A/Ohio/Swine/01/2007 (H1N1)	HA (aa 18-529) protein	C-terminal 6x his tag	IA-SW2W-005P
	Anti-HA antibody	pAb, rabbit IgG	IA-OH1-0100
A/Puerto Rico/8/34 (H1N1)	HA1 (aa 18-345)	C-terminal 6x his tag	IA-0010-005P
	HA (aa 18-529) protein	C-terminal 6x his tag	IA-H1-PR8WP
	HA Trimer (aa 18-518)	C-terminal 6x his tag	IA-H1-PR8t
	Anti-HA antibody	pAb, rabbit IgG	IA-011-0100
A/Solomon Islands/3/06 (H1N1)	HA1 (aa 18-344) protein	C-terminal 6x his tag	IA-0011-005P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-0011W-005P
A/South Carolina/1/18 (H1N1)	HA1 (aa 19-344) protein	C-terminal 6x his tag	IA-0014-005P
	HA (aa 19-529) proein	C-terminal 6x his tag	IA-0014W-005P
A/Victoria/2570/2019(H1N1)	HA (aa 18-530) proein	C-terminal 6x his tag	IA-H1-V19WP
A/WS/33 (H1N1)	HA1 (aa 18-343) protein	C-terminal 6x his tag	IA-0013-005P
	Anti-HA antibody	pAb, rabbit IgG	IA-011-0100
A/Wisconsin/588/2019(H1N1)	HA (aa 18-530) proein	C-terminal 6x his tag	A-H1-W19WP

INFLUENZA VIRUS RESEARCH TOOLS

H2N2			
Subtype/Strain	Product Name	Product Description	Catalog Number
A/Canada/720/2005 (H2N2)	HA1 (aa 13-340) protein	C-terminal 6x his tag	IA-003-005P
	HA (aa 13-526) protein	C-terminal 6x his tag	IA-003W-005P
	Anti-H2 antibody, clone C05	mAb, mouse IgG1	MIA-H2-C05
A/Chicken/NY/29878/91 (H2N2)	Anti-HA1 antibody	pAb, rabbit IgG	IA-003-0100
A/Japan/305/1957 (H2N2)	HA (aa 16-525) protein	C-terminal 6x his tagged	IA-0032W-005P
	Anti-H2 antibody, clone 317	mAb, mouse IgG1	MIA-H2-317

H3N2			
Subtype/Strain	Product Name	Product Description	Catalog Number
A/Aichi/2/1968 (H3N2)	HA full-length cDNA clone	Codon optimized ORF cDNA	HA-3079
	HA (aa 18-530)	C-terminal 8x his tag	IA-H3-0043t
A/Beijing/32/92 (H3N2)	HA trimer (aa 17-529)	C-terminal 6x his tag	IA-H3-00411t
A/Brisbane/10/2007 (H3N2)	HA1 (aa 17-345) protein	C-terminal 6x his tag	IA-0042-005P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-0042W-005P
	NP protein	C-terminal 6x his tag	IA-NP-024P
	NS1 protein	C-terminal 6x his tag	IA-NS1-031P
	Anti-HA antibody	pAb, rabbit IgG	IA-BR10-0100
	Anti-multiple H3 antibody	pAb, rabbit IgG	IA-PAN4-0100
	Anti-M2 antibody	pAb, rabbit IgG	IA-M2-A80
	NA full-length cDNA clone	Codon optimized ORF cDNA	NA-3073
A/Cambodia/e0826360/2020 (H3N2)	HA (aa 17-529) protein	C-terminal 8x his tag	IA-H3-C20WP
A/Darwin/9/2021 (H3N2)	HA (aa 17-529) protein	C-terminal 8x his tag	IA-H3-D21WP
A/England/42/72 (H3N2)	HA trimer (aa 17-530)	C-terminal 6x his tag	IA-H3-00420t
A/Hong Kong/1/1968 (H3N2)	HA trimer (aa 17-529)	C-terminal 6x his tag	IA-H3-00418t
A/Hong Kong/68 (H3N2)	HA full-length cDNA clone	ORF cDNA clone	HA-3000
A/Hong Kong/4801/2014 (H3N2)	HA1 (aa 17-345) protein	C-terminal 6x his tag	IA-H3-714P
	HA (aa 17-529) protein	C-terminal 6x his tag	IA-H3-714WP
	HA2 (aa 325-529) protein	C-terminal 6x his tag	IA-HA2-714P
	Anti-H3 antibody, clone IT-1C6	mAb, mouse IgG1	MIA-H3-HK014
	Anti-H3 antibody, clone IT-4B	mAb, mouse IgG1	MIA-H3-HK214
A/Hong Kong/3059/2017 (H3N2)	HA (aa 17-529) protein	C-terminal 6x his tag	IA-H3-HK17WP
A/Hong kong/45/2019 (H3N2)	HA (aa 17-529) protein	C-terminal 6x his tag	IA-H3-HK45WP
A/Hong kong/2671/2019 (H3N2)	HA (aa 17-529) protein	C-terminal 6x his tag	IA-H3-HK2671WP
A/Kansas/14/2017 (H3N2)	HA1 (aa 17-345) protein	C-terminal 6x his tag	IA-H3-K17P
	HA (aa 17-529) protein	C-terminal 6x his tag	IA-H3-K17WP
	HA (Y98F)(aa 17-529) protein	FLAG + 6x his tag	IA-H3-K17WPm

INFLUENZA VIRUS RESEARCH TOOLS

<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/Perth/16/2009 (H3N2)	HA trimer (aa 18-529) protein	C-terminal 6x his tag	IA-H3-0045t
	HA (aa 18-529) protein	C-terminal 6x his tag	A-0045W-005P
	HA full-length cDNA clone	Codon optimized ORF cDNA	HA-P342
	HA ELISA assay kit	Sandwich ELISA, 96-well	CA-I319
A/Shangdong/9/93 (H3N2)	Anti-H3 antibody, clone 227	mAb, mouse IgG1	MIA-H3-227
	Anti-H3 antibody, clone 246	mAb, mouse IgG2a	MIA-H3-246
A/Singapore/IN-FIMH-16-0019/2016 (H3N2)	HA (aa 18-529) protein	C-terminal 6x his tag	IA-H3-S16WP
	HA (Y98F)(aa 18-529) protein	V5 + 6x his tag	IA-H3-S16WpM
A/Singapore/INFIMH-16-0019/2016X (H3N2)	HA (aa 18-529) protein	C-terminal 6x his tag	IA-H3-S16XWP
A/Switzerland/9715293/2013 (H3N2)	HA1 (aa 17-346) protein	C-terminal 6x his tag	IA-H3-013P
	Anti-H3 antibody	mAb, mouse IgG2a	MIA-H3-S97
A/Texas/50/2012(H3N2)	HA1 (aa 17-345) protein	C-terminal 6x his tag	IA-H3-050P
	HA (aa 17-529) protein	C-terminal 6x his tag	IA-H3-050WP
	Anti-HA antibody	mAb, mouse IgG1	MIA-H3-501
	HA full-length cDNA clone	Codon optimized ORF cDNA	HA-T219
A/Udorn/72(H3N2)	HA full-length cDNA clone	Codon optimized ORF cDNA	HA-3032
A/Victoria/210/2009(H3N2)	HA1 (aa 19-350) protein	C-terminal 6x his tag	IA-H3-00421P
	HA (aa 19-531) protein	C-terminal 6x his tag	IA-H3-00421WP
A/Victoria/361/2011(H3N2)	HA (aa 17-346) protein	C-terminal 6x his tag	IA-H3-423P
	HA (aa 17-529) protein	C-terminal 6x his tag	IA-H3-423WP
	Anti-H3 antibody, clone IT-M1	mAb, mouse IgG1	MIA-H3-V361
	Anti-H3 antibody, clone IT-M13	mAb, mouse IgG1	MIA-H3-V362
	HA full-length cDNA clone	Codon optimized ORF cDNA	HA-V328
A/Wiscosin/67/X-161/2005(H3N2)	HA1 (aa 17-346) protein	C-terminal 6x his tag	IA-0041-005P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-0041W-005P
	Neuraminidase	C-terminal 6x his tag	IA-NA3-W05P
	Anti-HA1 antibody	pAb, rabbit IgG	IA-004A-0100
	Anti-HA antibody	pAb, rabbit IgG	IA-WS67-0100
	Anti-multiple H3 antibody	pAb, rabbit IgG	IA-PAN4-0100
A/Wyoming/3/03(H3N2)	HA1 (aa 18-347) protein	C-terminal 6x his tag	IA-004-005P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-004W-005P
	Anti-HA1 antibody	pAb, rabbit IgG	IA-004-0100
	Anti-HA antibody	pAb, rabbit IgG	IA-WY3-0100
	Anti-multiple H3 antibody	pAb, rabbit IgG	IA-PAN4-005P
A/Switzerland/9715293/2013 (H3N2)	HA1 (aa 17-346) protein	C-terminal 6x his tag	IA-H3-013P
	Anti-H3 antibody	mAb, mouse IgG2a	MIA-H3-S97

INFLUENZA VIRUS RESEARCH TOOLS

<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/Texas/50/2012(H3N2)	HA1 (aa 17-345) protein	C-terminal 6x his tag	IA-H3-050P
	HA (aa 17-529) protein	C-terminal 6x his tag	IA-H3-050WP
	Anti-HA antibody	mAb, mouse IgG1	MIA-H3-501
	HA full-length cDNA clone	Codon optimized ORF cDNA	HA-T219
A/Udorn/72(H3N2)	HA full-length cDNA clone	Codon optimized ORF cDNA	HA-3032
A/Victoria/210/2009(H3N2)	HA1 (aa 19-350) protein	C-terminal 6x his tag	IA-H3-00421P
	HA (aa 19-531) protein	C-terminal 6x his tag	IA-H3-00421WP
A/Victoria/361/2011(H3N2)	HA (aa 17-346) protein	C-terminal 6x his tag	IA-H3-423P
	HA (aa 17-529) protein	C-terminal 6x his tag	IA-H3-423WP
	Anti-H3 antibody, clone IT-M1	mAb, mouse IgG1	MIA-H3-V361
	Anti-H3 antibody, clone IT-M13	mAb, mouse IgG1	MIA-H3-V362
	HA full-length cDNA clone	Codon optimized ORF cDNA	HA-V328
A/Wiscosin/67/X-161/2005(H3N2)	HA1 (aa 17-346) protein	C-terminal 6x his tag	IA-0041-005P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-0041W-005P
	Anti-HA1 antibody	pAb, rabbit IgG	IA-004A-0100
	Anti-HA antibody	pAb, rabbit IgG	IA-WS67-0100
	Anti-multiple H3 antibody	pAb, rabbit IgG	IA-PAN4-0100
A/Wyoming/3/03(H3N2)	HA1 (aa 18-347) protein	C-terminal 6x his tag	IA-004-005P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-004W-005P
	Anti-HA1 antibody	pAb, rabbit IgG	IA-004-0100
	Anti-HA antibody	pAb, rabbit IgG	IA-WY3-0100
	Anti-multiple H3 antibody	pAb, rabbit IgG	IA-PAN4-005P

H4N6

<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/environment/Maryland/1101/06(H4N6)	Anti-HA antibody	pAb, rabbit IgG	IA-014-0100
A/mallard/Ohio/657/2002 (H4N6)	HA1 (aa 17-343) protein	C-terminal 6x his tag	IA-006-005P
A/Swine/Ontario/01911-1/99 (H4N6)	HA (aa 17-530) protein	C-terminal 6x his tag	IA-0061W-005P

H5N1

<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/Anhui/1/2005 (H5N1)	HA (aa 18-530) protein	C-terminal 6x his tag	IA-0053-005P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-0053W-005P
	Anti-HA antibody, clone IT-1031	mAb, mouse IgG1	MIA-0052
	Anti-HA antibody, clone IT-1056	mAb, mouse IgG1	MIA-0053
	HA ELISA assay kit	Sandwich ELISA, 96-well	CA-I555
A/Bar-headed Goose/Qinghai/12/2005 (H5N1)	H5 (aa 17-530) protein	C-terminal 6x his tag	IA-0055-005P
	Anti-HA1 antibody	pAb, rabbit IgG	IA-006-0100

INFLUENZA VIRUS RESEARCH TOOLS

H5N1			
<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/chicken/India/NIV33487/2006 (H5N1)	HA (aa 17-530) protein	C-terminal 6x his tag	IA-00516-005P
A/chicken/Vietnam/NCVD-016 /2008 (H5N1)	HA (aa 18-534) protein	C-terminal 6x his tag	IA-H5-00518WP
A/Common magpie/Hong Kong/2256/2006 (H5N1)	HA (aa 17-530) protein	C-terminal 6x his tag	IA-00515-005P
A/Egypt/2321-NAMRU3/2007 (H5N1)	HA (aa 17-530) protein	C-terminal 6x his tag	IA-00511-005P
A/Egypt/chicken/2253-1/2006 (H5N1)	HA (aa 17-530) protein	C-terminal 6x his tag	IA-00512-005P
A/Egypt/N03072/2010 (H5N1)	HA1 (aa 18-345) protein	C-terminal 6x his tag	IA-H5-520P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-H5-520WP
A/goose/Guiyang/337/2006 (H5N1)	HA (aa 17-530) protein	C-terminal 6x his tag	IA-00513-005P
A/Hong Kong/156/97 (H5N1)	H5 (aa 18-346) protein	C-terminal 6x his tag	IA-0056-005P
	HA full-length cDNA clone	Codon optimized ORF cDNA	HA-5088
A/Hong Kong/483/97 (H5N1)	H5 (aa 17-346) protein	C-terminal 6x his tag	IA-0057-005P
	Anti-H5 antibody	pAb, rabbit IgG	IA-005H-0100
A/Hubei/1/2010 (H5N1)	HA1 (aa 18-341) protein	C-terminal 6x his tag	IA-H5-519P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-H5-519WP
A/Indonesia/5/2005 (H5N1)	H5 (aa 1-530) protein	N-terminal hFc tag	IA-H5-069P
	H5 (aa 18-530) protein	C-terminal 6x his tag	IA-0052-005P
	H5 (aa 17-530) protein	C-terminal 6x his tag	IA-0052W-005P
	Nucleocapsid protein (NP)	C-terminal 6x his tag	IA-023-005P
	HA full-length cDNA clone	Codon optimized ORF cDNA	HA-5069
	HA ELISA assay kit	Sandwich ELISA, 96-well	CA-I555
A/Japanese white-eye/Hong Kong/1038/2006 (H5N1)	H5 (aa 17-530) protein	C-terminal 6x his tag	IA-00514-005P
	HA ELISA assay kit	Sandwich ELISA, 96-well	CA-I586
A/Vietnam/1203/2004 (H5N1)	HA1 (aa 1-345) protein	C-terminal 6x his tag	IA-005-005P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-0051-005P
	HA trimer (aa 18-530) protein	C-terminal 6x his tag	IA-H5-0051t
	Neuraminidase	C-terminal 6x his tag	IA-NA-VN04P
	Anti-HA antibody	pAb, rabbit IgG	IA-005-0100
	Anti-HA2 antibody	pAb, rabbit IgG	IA-010-0100
	Anti-M1 antibody	pAb, rabbit IgG	IA-012-0100
	Anti-NA antibody	pAb, rabbit IgG	IA-021-0100
	Anti-NS1 antibody	pAb, rabbit IgG	IA-025-0100
Avian Influenza A (H5N1)	Anti-H5 antibody, clone 082	mAb, mouse IgG2a	MIA-H5-082
	Anti-H5 antibody, clone 119	mAb, mouse IgG2a	MIA-H5-119
	Anti-NS antibody, clone 41	mAb, mouse IgG2a	MIA-NS-041
	Anti-NS antibody, clone 910	mAb, mouse IgG2b	MIA-NS-910
	NA full-length cDNA clone	Codon optimized ORF cDNA	NA-5023

INFLUENZA VIRUS RESEARCH TOOLS

H5N2, H5N3, H5N8			
Subtype/Strain	Product Name	Product Description	Catalog Number
A/American green-winged teal/ California/HKWF609/07(H5N2)	HA (aa 19-506) protein	C-terminal 6x his tag	IA-018W-005P
A/duck/Hokkaido/ 167/07(H5N3)	HA (aa 18-500) protein	C-terminal 6x his tag	IA-019W-005P
A/duck/NY/191255-59/ 2002(H5N8)	HA (aa 1-490) protein	C-terminal 6x his tag	IA-020W-005P
A/gyrfalcon/Washington/ 41088-6/2014(H5N8)	HA1 (aa 17-341) protein	C-terminal 6x his tag	IA-H5-058P

H6N1, H6N2			
Subtype/Strain	Product Name	Product Description	Catalog Number
A/northern shoveler/California/ HKWF115/07(H6N1)	HA (aa 17-529) protein	C-terminal 6x his tag	IA-021W-005P
A/duck/Hainan/6/2004(H6N2)	Anti-HA1 antibody	pAb, rabbit IgG	IA-007-0100

H7N2, H7N7, H7N9			
Subtype/Strain	Product Name	Product Description	Catalog Number
A/chicken/MD/ MINHMA/2004(H7N2)	Anti-HA1 antibody	pAb, rabbit IgG	IA-008-0100
A/chicken/Netherlands/ 1/03(H7N7)	HA1 (aa 26-344) protein	C-terminal 6x his tag	IA-008-005P
	HA (aa 17-527) protein	C-terminal 6x his tag	IA-008W-005P
	Anti-HA antibody, clone IT-095	mAb, mouse IgG2a	MIA-0081
	Anti-NA antibody	pAb, rabbit IgG	IA-028-0100
	HA full-length cDNA clone	Codon optimized ORF cDNA	HA-N639
A/England/268/96(H7N7)	HA (aa 18-530) protein	C-terminal 6x his tag	IA-007W-005P
A/Netherlands/219/03(H7N7)	Anti-H7 antibody, clone 334	mAb, mouse IgG1	MIA-H7-334
	Anti-H7 antibody, clone 414	mAb, mouse IgG2b	MIA-H7-414
A/Hong Kong/125/2017(H7N9)	HA1 (aa 19-339) protein	C-terminal 6x his tag	IA-H7-HK017P
A/Shanghai/02/2013(H7N9)	Neuraminidase (aa 36-465)	C-terminal 6x his tag	IA-NA7-SH13P
	Anti-H7 antibody	pAb, rabbit IgG	IA-SH7-009
	Anti-H7 antibody	pAb, rabbit IgG	A-SH7-009
	HA full-length cDNA clone	Codon optimized ORF cDNA	HA-7902
A/northern shoveler/Mississippi/ 11OS145/2011(H7N9)	Anti-M2 antibody	pAb, rabbit IgG	IA-M2-C82
A/Wuxi/2/2013(H7N9)	HA (aa 19-535) protein	C-terminal 6x his tag	IA-H7-019P

H8N4			
Subtype/Strain	Product Name	Product Description	Catalog Number
A/pintail/Alberta/114/1979(H8N4)	HA1 (aa 16-343) protein	C-terminal 6x his tag	IA-010-005P
A/duck/Hainan/6/2004(H6N2)	Anti-HA1 antibody	pAb, rabbit IgG	IA-007-0100

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H9N2			
<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/chicken/HongKong/ NT366/03(H9N2)	Anti-HA1 antibody	pAb, rabbit IgG	IA-009-0100
	Anti-NA antibody	pAb, rabbit IgG	IA-027-0100
A/chicken/Hong Kong/ G9/97(H9N2)	Anti-H9 antibody, clone 355	mAb, mouse IgG1	MIA-H9-355
	Anti-H9 antibody, clone 370	mAb, mouse IgG1	MIA-H9-370
A/chicken/Korea/GH2/07(H9N2)	Anti-M2 antibody	pAb, rabbit IgG	IA-M2-D83
A/guinea fowl/Hong Kong/ WF10/99(H9N2)	HA1 (aa 20-339) protein	C-terminal 6x his tag	IA-009-005P
	HA (aa 18-530) protein	C-terminal 6x his tag	IA-009W-005P
	Anti-HA antibody, clone IT-091F	mAb, mouse IgG1	MIA-0091
	Anti-HA antibody, clone IT-091H	mAb, mouse IgG1	MIA-0092
A/Hong Kong/1073/99(H9N2)	HA (aa 19-530) protein	C-terminal 6x his tag	IA-0091W-005P
A/Hong Kong/33982/2009(H9N2)	HA (aa 17-523) protein	C-terminal 6x his tag	IA-H9-094WP

H11N2			
<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/duck/Yangzhou/ 906/2002(H11N2)	HA1 (aa 17-342) protein	C-terminal 6x his tag	IA-012-005P
	Anti-HA antibody	pAb, rabbit IgG	IA-0015-0100

H12N5			
<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/green-winged teal/ALB/ 199/91(H12N5)	HA1 (aa 17-342) protein	C-terminal 6x his tag	IA-013-005P
A/pintail/Alaska/102/05(H12N5)	Anti-H12 antibody	pAb, rabbit IgG	IA-013-0100

H13N8			
<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/black-headed gull/Netherlands/ 1/00(H13N8)	HA (aa 17-530) protein	C-terminal 6x his tag	IA-014W-005P

H14			
<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/mallard/Gurjev/263/1982(H14)	Anti-H14 antibody	pAb, rabbit IgG	IA-017-0100

H15N8			
<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/Australia/83/2000(H15N8)	Anti-H15 antibody	pAb, rabbit IgG	IA-018-0100
A/duck/AUS/341/1983(H15N8)	HA (aa 18-534) protein	C-terminal 6x his tag	IA-016W-005P

H16N3			
<i>Subtype/Strain</i>	<i>Product Name</i>	<i>Product Description</i>	<i>Catalog Number</i>
A/black-headed gull/Sweden/ 5/99(H16N3)	HA (aa 16-530) protein	C-terminal 6x his tag	IA-017W-005P
A/Sweden/99(H16N3)	Anti-H1 antibody	pAb, rabbit IgG	IA-019-0100

INFLUENZA VIRUS RESEARCH TOOLS

1.2. Influenza B virus research products

Antibodies Against Influenza B Hemagglutinin (HA) Protein			
Subtype/Strain	Product Name	Product Description	Catalog Number
B/Brisbane/60/2008	Anti-HA antibody, clone IT-91D	mAb, mouse IgG1	MIB-HA-323
	Anti-HA antibody, clone IT-90G	mAb, mouse IgG1	MIB-HA-324
	Anti-HA2 antibody	pAb, rabbit IgG	IA-HA2-0608
	Anti-HA2 antibody	pAb, rabbit serum	IA-HA2-1608
B/Malaysia/2506/2004	Anti-HA antibody	pAb, rabbit IgG	IA-032-0100
B/Massachusetts/2/2012	Anti-HA antibody, clone IT-4B	mAb, mouse IgG1	MIB-HA-191
B/Phuket/3072/2013	Anti-HA antibody, clone IT-BM2	mAb, mouse IgG2a	MIB-HA-P12
B/Tokyo/53/99	Anti-HA2 antibody, clone H18	mAb, mouse IgG2a	MIB-HA-018
	Anti-HA2 antibody, clone InB190	mAb, mouse IgG2b	MIB-HA-190
B/Wisconsin/01/2010	Anti-HA antibody, clone IT-28B	mAb, mouse IgG2a	MIB-HA-327
	Anti-HA antibody, clone IT-22E	mAb, mouse IgG2a	MIB-HA-329

Antibodies Against Influenza B Matrix Protein			
Subtype/Strain	Product Name	Product Description	Catalog Number
B/Tokyo/53/99	Anti-M1 antibody, clone H04	mAb, mouse IgG1	MIB-M1-004

Antibodies Against Influenza B Nucleoprotein (NP)			
Subtype/Strain	Product Name	Product Description	Catalog Number
B/Malaysia/2506/2004	Anti-NP antibody	pAb, rabbit IgG	IA-031-0100
B/Tokyo/53/99	Anti-NP antibody, clone B027	mAb, mouse IgG1	MIB-NP-027
	Anti-NP antibody, clone B164	mAb, mouse IgG1	MIB-NP-064

Recombinant Hemagglutinin (HA) Proteins			
Subtype/Strain	Product Name	Product Description	Catalog Number
B/Austria/1359417/2021	HA (aa 16-546) trimer protein	C-terminal 8x his tag	IB-HA-A21WP
B/Brisbane/60/2008	HA (aa 17-546) protein	C-terminal 6x his tag	IA-B3-005P
	HA1 (aa 16-363) protein	C-terminal 6x his tag	IB-HA1-608P
	HA2 (aa 361-547) protein	C-terminal hFc tag	IB-HA2-608P
	HA2 (aa 361-547) protein	C-terminal HSA/6xHis tag	IB-HA2-2608P
B/Colorado/06/2017	HA (aa 16-546) protein	C-terminal 6x his tag	IB-HA-C17P
	Neuraminidase	C-terminal 6x his tag	IB-NA-C17P
B/Florida/4/2006	HA (aa 16-546) protein	C-terminal 6x his tag	IA-B2-005P
B/Malaysia/2506/2004	HA (aa 11-542) protein	C-terminal 6x his tag	IB-HA-M04P
B/Massachusetts/02/2012	HA (aa 16-548) protein	C-terminal 6x his tag	IA-BM7-005WP
B/Phuket/3073/2013	HA (aa 16-546) protein	C-terminal 6x his tag	IA-HA-P13P
B/Washington/02/2019(B/Victoria lineage)-like virus	HA (aa 16-543) protein	C-terminal 6x his tag	IB-HA-W19WP
B/Wisconsin/01/2010	HA (aa 16-546) protein	C-terminal 6x his tag	IA-BW5-005P

INFLUENZA VIRUS RESEARCH ANTIBODIES

1.3. Influenza A/B rabbit polyclonal antibodies

<i>Catalog Number</i>	<i>Product Description</i>
IA-BR59-0100	Anti-H1 (A/Brisbane/59/07)(H1N1) pAb
IA-H1-CA2	Anti-H1 (A/California/04/2009)(H1N1) (aa 200-250) pAb
IA-H1-CA3	Anti-H1 (A/California/04/2009)(H1N1) (aa 400-500) pAb
IA-01SW-0100	Anti-HA (A/California/06/2009)(H1N1) pAb
IA-036-0100	Anti-M1 (A/California/06/2009)(H1N1) pAb
IA-M2-B81	Anti-M2 (A/California/06/2009)(H1N1) pAb
IA-038-0100	Anti-NA (A/California/06/2009)(H1N1) pAb
IA-037-0100	Anti-NS1 (A/California/06/2009)(H1N1) pAb
IA-HA1-007	Anti-HA1 (A/California/07/2009)(H1N1) pAb
IA-001-0100	Anti-HA1 (A/New Caledonia/20/1999) (H1N1) pAb
IA-011-0100	Anti-H1 (A/New Caledonia/20/99, A/Puerto Rico/8/34, and A/WS/33)(H1N1) pAb
IA-NC20-0100	Anti-H1 (A/New Caledonia/20/99)(H1N1) pAb
IA-039-0100	Anti-NA (A/New Caledonia/20/1999)(H1N1) pAb
IA-023-0100	Anti-NP (A/New Caledonia/20/1999) (H1N1) pAb
IA-OH1-0100	Anti-H1 (A/Ohio/Swine/01/07)(H1N1) pAb
IA-SC1-0100	Anti-H1 (A/South Carolina/1/18)(H1N1) pAb
IA-003-0100	Anti-HA1 (A/chicken/NY/29878/91)(H2N2) pAb
IA-BR10-0100	Anti-H3 (A/Brisbane/10/07)(H3N2) pAb
IA-M2-A80	Anti-M2 (A/Brisbane/10/2007)(H3N2) pAb
IA-PAN4-0100	Anti-H3 (A/Brisbane/10/2007, A/Wisconsin/67/X-161/2005, and A/Wyoming/3/03)(H3N2) pAb
IA-004A-0100	ANTI-H3 (A/WIS/2005)(H3N2) pAb
IA-004-0100	Anti-HA1 (A/ Wyoming/3/03)(H3N2) pAb
IA-WS67-0100	Anti-H3 (A/Wisconsin/67/X-161/05)(H3N2) pAb
IA-WY3-0100	Anti-H3 (A/Wyoming/3/03)(H3N2) pAb
IA-014-0100	Anti-H4 (A/environment/Maryland/1101/06)(H4N6) pAb
IA-006-0100	Anti-HA1 (A/Bar-headed Goose/Qinghai/12/2005) (H5N1) pAb
IA-005H-0100	Anti-H5 (A/Hong Kong/483/97)(H5N1) pAb
IA-005-0100	Anti-HA1 (A/Vietnam/1203/2004) (H5N1) pAb
IA-010-0100	Anti-HA2 (A/Vietnam/1203/2004)(H5N1) pAb
IA-012-0100	Anti-M1 (A/ Vietnam/1203/2004)(H5N1) pAb
IA-021-0100	Anti-NA (A/Vietnam/1203/2004) (H5N1) pAb
IA-025-0100	Anti-NS1 (A/Vietnam/1203/2004)(H5N1) pAb
IA-007-0100	Anti-HA1 (A/duck/Hainan/6/2004)(H6N2) pAb
IA-008-0100	Anti-HA1 (A/chicken/MD/MINHMA/2004)(H7N2) pAb
IA-028-0100	Anti-NA (A/Chicken/Netherlands/1/03)(H7N7) pAb
IA-SH7-009	Anti-H7 (A/Shanghai/2/2013)(H7N9) pAb
IA-M2-C82	Anti-M2 (A/nothern shoverl/Mississippi/110S145/2011)(H7N9) pAb
IA-033-0100	Anti-H8 (A/pintail duck/Alberta/114/1979)(H8N4) pAb
IA-009-0100	Anti-HA1 (A/chicken/HongKong/NT366/03)(H9N2) pAb
IA-M2-D83	Anti-M2 (A/chicken/Korea/GH2/2007)(H9N2) pAb

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IA-027-0100	Anti-NA (A/Chicken/HongKong/NT366/03)(H9N2) pAb
IA-0015-0100	Anti-H11 (A/duck/Yangzhou/906/02)(H11N2) pAb
IA-013-0100	Anti-H12 (A/pintail/Alaska/102/05)(H12N5) pAb
IA-017-0100	Anti-H14 (A/mallard/Gurjev/263/1982)(H14) pAb
IA-018-0100	Anti-H15 (A/Australia/83/2000)(H15N8) pAb
IA-019-0100	Anti-H16 (A/Sweden/99)(H16N3) pAb
IA-032-0100	Anti-HA (B/Malaysia/2506/2004) pAb
IA-031-0100	Anti-NP (B/Malaysia/2506/2004) pAb
IB-HA2-0608	Anti-HA2 (B/Brisbane/60/2008) pAb
IB-HA2-1608	Anti-HA2 (B/Brisbane/60/2008) anti-serum

1.4. Influenza A/B mouse monoclonal antibodies

<i>Catalog Number</i>	<i>Product Description</i>
MIA-0011	Anti-HA (A/New Caledonia/20/99)(H1N1) mAb, clone IT-010
MIA-0012	Anti-HA (A/New Caledonia/20/99)(H1N1) mAb, clone IT-015
MIA-0013	Anti-HA (A/California/06/2009)(H1N1) mAb, clone IT-096
MIA-0014	Anti-HA (A/California/06/2009)(H1N1) mAb, clone IT-26D11
MIA-0015	Anti-HA (A/California/06/2009)(H1N1) mAb, clone IT-2F3
MIA-H1-M015	Anti-HA (A/Michigan/45/2015)(H1N1) mAb, clone IT-3A10
MIA-0017	Anti-H1 (A/New Caledonia/20/99)(H1N1) mAb, clone IT-3455
MIA-0018	Anti-H1 (A/New Caledonia/20/99)(H1N1) mAb, clone IT-3430
MIA-0019	Anti-H1 (A/Brisbane/59/2007)(H1N1) mAb, clone IT-8F8
MIA-H1-004	Anti-Influenza A virus hemagglutinin H1 mAb, clone 4
MIA-H1-102	Anti-Influenza A virus hemagglutinin H1 mAb, clone 102
MIA-0115	Anti-H1 (Swine Flu H1N1/2009) mAb, clone IT-026
MIA-NP-108	Anti-NP (A/New Caledonia/20/99/H1N1) mAb, clone 108
MIA-NP-245	Anti-NP (A/New Caledonia/20/99/H1N1) mAb, clone 245
MIA-H2-317	Anti-H2 (A/Japan/305/57)(H2N2) mAb, clone 317
MIA-H2-C05	Anti-H2 (A/Canada/720/2005)(H2N2) mAb, clone IT-M31
MIA-H3-227	Anti-Influenza A virus hemagglutinin H3 mAb, clone 227
MIA-H3-246	Anti-Influenza A virus hemagglutinin H3 mAb, clone 246
MIA-H3-B07	Anti- H3 (A/Brisbane/10/2007)(H3N2), clone IT-64D1
MIA-H3-501	Anti- H3 (A/Texas/50/2012)(H3N2), clone IT-501
MIA-H3-S97	Anti-H3 (H3N2)(A/Switzerland/9715293/2013) mAb, clone IT-M20
MIA-H3-V361	Anti-H3 (H3N2)(A/Victoria/361/2011) mAb, clone IT-M1
MIA-H3-V362	Anti-H3 (H3N2)(A/Victoria/361/2011) mAb, clone IT-M13
MIA-H3-HK014	Anti-H3 (H3N2)(A/Hong Kong/4801/2014) mAb, clone IT-1C6
MIA-H3-HK214	Anti-H3 (H3N2)(A/Hong Kong/4801/2014) mAb, clone IT-4B

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MIA-H5-082	Anti-influenza A virus hemagglutinin H5 mAb, clone 82
MIA-H5-119	Anti-influenza A virus hemagglutinin H5 mAb, clone 119
MIA-0052	Anti-H5 (A/Anhui/1/2005)(H5N1) mAb, clone IT-1031
MIA-0053	Anti-H5 (A/Anhui/1/2005)(H5N1) mAb, clone IT-1056
MIA-NS-041	Anti-Influenza A virus NS (H5N1) mAb, clone 41
MIA-NS-910	Anti-Influenza A virus NS (H5N1) mAb, clone 910
MIA-0081	Anti-HA (A/Chicken/Netherlands/1/03/)(H7N7), clone IT-095
MIA-H7-414	Anti-H7 (A/Netherlands/219/03)(H7N7) mAb, clone 414
MIA-H9-355	Anti-H9 (A/Chicken/Hong Kong/G9/97)(H9N2) mAb, clone 355
MIA-H9-370	Anti-H9 (A/Chicken/Hong Kong/G9/97)(H9N2) mAb, clone 370
MIA-0091	Anti-HA (A/Guinea Fowl/Hong Kong/WF10/99)(H9N2) mAb, clone IT-091F
MIA-0092	Anti-HA (A/Guinea Fowl/Hong Kong/WF10/99)(H9N2) mAb, clone IT-091H
MIA-H9-HK09	Anti-H9 (A/Hong Kong/33982/2009)(H9N2) mAb, clone IT-948
MIB-HA-323	Anti-HA (B/Brisbane/60/2008) mAb, clone IT-91D
MIB-HA-324	Anti-HA (B/Brisbane/60/2008) mAb, clone IT-90G
MIB-HA-191	Anti-HA (B/Massachusetts/2/2012) mAb, clone IT-4B
MIB-HA-P12	Anti-HA (B/Phuket/3072/2013) mAb, clone IT-BM2
MIB-HA-327	Anti-HA (B/Wisconsin/01/2010) mAb, clone IT-28B
MIB-HA-329	Anti-HA (B/Wisconsin/01/2010) mAb, clone IT-22E
MIB-HA-018	Anti-HA2 (B/Tokyo/53/99) mAb, clone H18
MIB-HA-190	Anti-HA2 (B/Tokyo/53/99) mAb, clone InB190
MIB-M1-004	Anti-Influenza B Matrix protein M1 mAb, clone H04
MIB-M1-015	Anti-Influenza B Matrix protein M1 mAb, clone H15
MIB-NP-027	Anti-Influenza B virus Nucleoprotein (NP) mAb, clone B027
MIB-NP-064	Anti-Influenza B virus Nucleoprotein (NP) mAb, clone B164

INFLUENZA VIRUS RESEARCH PROTEINS

1.5. Recombinant proteins for influenza A/B viruses

- All recombinant proteins are expressed from human 293 cells unless specified
- Antibody ELISA, immunogen, HI assay, neutralization assay, westernblot standard, etc.

<i>Catalog Number</i>	<i>Product Description</i>
IA-0012-005P	HA1 (aa 18-343)(A/Brisbane/59/2007)(H1N1)
IA-0012W-005P	HA (aa 18-530)(A/Brisbane/59/2007)(H1N1)
IA-H1-B18P	HA (aa 18-343)(A/Brisbane/02/2018)(H1N1)-pdm09-like
IA-H1-B18WP	HA (aa 18-530)(A/Brisbane/02/2018)(H1N1)-pdm09-like
IA-H1-B18WPm	HA (Y98F)(aa 18-530)(A/Brisbane/02/2018)(H1N1)-pdm09-like
IA-01SW-005P	HA1 (aa 18-344)(A/California/06/09)(H1N1)
IA-11SW-005P	HA (aa 18-530)(A/California/06/09)(H1N1)
IA-H1-11SWt	HA Trimer (aa 18-530)(A/California/06/09)(H1N1)
IA-01SW-12P	HA1 (aa 18-345)(A/California/07/2009)(H1N1)
IA-SW-12P	HA (aa 18-529)(A/California/07/2009)(H1N1)
IA-M1-C19P	M1 (A/California/07/2009)(H1N1)
IA-M1-023P	M1 (A/California/04/2009)(H1N1)
IA-NS1-021P	NS1 (A/California/04/2009)(H1N1)
IA-H1-GM19WP	HA (aa 18-530)(A/Guangdong-Maonan/SWL1536/2019)(H1N1)-pdm09-like virus
IA-H1-GM19WPm	HA (Y98F)(aa 18-530)(A/Guangdong-Maonan/SWL1536/2019)(H1N1)-pdm09-like virus
IA-H1-H19WP	HA (aa 18-530)(A/Hawaii/70/2019)(H1N1)-pdm09-like virus
IA-H1-M15WP	HA (aa 18-529)(A/Michigan/45/2015)(H1N1)
IA-NA-M15P	NA (aa 36-469)(A/Michigan/45/2015)(H1N1)
IA-001-005P	HA1 (aa 18-345)(A/New Caledonia/20/99)(H1N1)
IA-001W-005P	HA (aa 18-530)(A/New Caledonia/20/99)(H1N1)
IA-SW2W-005P	HA (aa 18-529)(A/Ohio/01/07)(H1N1)
IA-0010-005P	HA1 (aa 18-345)(A/PR/8/34)(H1N1)
IA-H1-PR8WP	HA (aa 18-529)(A/Puerto Rico/8/1934)(H1N1)
IA-H1-PR8t	HA trimer (aa 18-518)(A/Puerto Rico/8/1934)(H1N1)
IA-0011-005P	HA1 (aa 18-344)(A/Solomon Islands/3/2006)(H1N1)
IA-0011W-005P	HA (aa 18-530)(A/Solomon Islands/3/2006)(H1N1)
IA-0014-005P	HA1 (aa 19-344)(A/South Carolina/1/18)(H1N1)
IA-0014W-005P	HA (aa 19-529)(A/South Carolina/1/18)(H1N1)
IA-H1-SD1207WP	HA (aa 18-530)(A/swine/Shandong/1207/2016/H1N1)
IA-0013-005P	HA1 (aa 18-343)(A/WS/33)(H1N1)
IA-003-005P	HA1 (aa 13-340)(A/Canada/720/2005)(H2N2)
IA-0032W-005P	HA (aa 16-525)(A/Japan/305/1957)(H2N2)
IA-003W-005P	HA (aa 13-526)(A/Canada/720/2005)(H2N2)
IA-H3-0043t	HA (aa 18-530)(A/Aichi/2/1968)(H3N2), with trimer domain
IA-H3-00411t	HA Trimer (aa 17-529)(A/Beijing/32/92)(H3N2)
IA-0042-005P	HA1 (aa 17-345) (A/Brisbane/10/2007)(H3N2)
IA-0042W-005P	HA (aa 18-530)(A/Brisbane/10/2007)(H3N2)

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IA-NP-024P	NP (A/Brisbane/10/2007)(H3N2)
IA-NS1-031P	NS1 (A/Brisbane/10/2007)(H3N2)
IA-H3-00420t	HA trimer (aa 17-530)(A/England/42/2014)(H3N2)
IA-H3-714P	HA2 (aa 17-345)(A/Hong Kong/4801/2014)(H3N2)
IA-H3-714WP	HA2(aa 17-529)(A/Hong Kong/4801/2014)(H3N2)
IA-HA2-714P	HA2 (aa 325-529)(A/Hong Kong/4801/2014)(H3N2)
IA-H3-HK17WP	HA (aa 17-529)(A/Hong Kong/3059/2017)(H3N2)
IA-H3-00418t	HA trimer (aa 17-529)(A/Hong Kong/1/1968)(H3N2)
IA-H3-HK45WP	HA (aa 17-529)(A/Hong Kong/45/2019)(H3N2)-like virus
IA-H3-HK2671WP	HA (aa 17-529)(A/Hong Kong/2671/2019)(H3N2)-like virus
IA-H3-K17P	HA1 (aa 17-345)(A/Kansas/14/2017)(H3N2)
IA-H3-K17WP	HA (aa 17-529)(A/Kansas/14/2017)(H3N2)
IA-H3-K17WPm	HA (Y98F)(aa 17-529)(A/Kansas/14/2017)(H3N2)
IA-0045W-005P	HA (aa 18-529)(A/Perth/16/2009)(H3N2)
IA-H3-0045t	HA trimer (aa 18-529)(A/Perth/16/2009)(H3N2)
IA-H3-S16WP	HA (aa 17-529)(A/Singapore/INFIMH-16-0019/2016)(H3N2)
IA-H3-S16XWP	HA (aa 17-529)(A/Singapore/INFIMH-16-0019/2016X)(H3N2)
IA-H3-013P	HA1 (aa 17-346)(A/Switzerland/9715293/2013)(H3N2)
IA-H3-050P	HA1 (aa 17-345) (A/Texas/50/2012)(H3N2)
IA-H3-050WP	HA1 (aa 17-529) (A/Texas/50/2012)(H3N2)
IA-H3-00421P	HA1 (aa 19-350)(A/Victoria/210/2009)(H3N2)
IA-H3-00421WP	HA (aa 19-531)(A/Victoria/210/2009)(H3N2)
IA-H3-423p	HA1 (aa 17-346)(A/Victoria/361/2011)(H3N2)
IA-H3-423Wp	HA (aa 17-529)(A/Victoria/361/2011)(H3N2)
IA-0041-005P	HA1 (aa 17-346)(A/Wisconsin/67/X-161/2005)(H3N2)
IA-0041W-005P	HA (aa 18-530)(A/Wisconsin/67/X-161/2005)(H3N2)
IA-NA3-W05P	NA (aa 36-469)(A/Wisconsin/67/2005)(H3N2)
IA-004-005P	HA1 (aa 18-347)(A/Wyoming/3/03) (H3N2)
IA-004W-005P	HA (aa 18-530)(A/Wyoming/3/03)(H3N2)
IA-006-005P	HA1 (aa 17-343)(A/mallard/Ohio/657/2002)(H4N6)
IA-0061W-005P	HA (aa 17-530)(A/Swine/Ontario/01911-1/99)(H4N6)
IA-0053w-005P	HA (aa18-530)(A/Anhui/1/2005)(H5N1)
IA-0055-005P	HA (aa 17-530)(A/Bar-headed Goose/Qinghai/12/2005)(H5N1)
IA-00516-005P	HA (aa 17-530)(A/chicken/India/NIV33487/2006)(H5N1)
IA-H5-00518WP	HA (aa 18-534)(A/chicken/Vietnam/NCVD-016/2008)(H5N1)
IA-00515-005P	HA (aa 17-530)(A/common magpie/Hong Kong/2256/2006)(H5N1)
IA-00511-005P	HA (aa 17-530)(A/Egypt/2321-NAMRU3/2007)(H5N1)
IA-00512-005P	HA (aa 17-530)(A/Egypt/chicken/2253-1/2006)(H5N1)
IA-H5-520P	HA1 (aa 18-345)(A/Egypt/N03072/2010)(H5N1)
IA-H5-520WP	HA (aa 18-530)(A/Egypt/N03072/2010)(H5N1)
IA-00513-005P	HA (aa 17-530)(A/goose/Guiyang/337/2006)(H5N1)

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IA-0056-005P	HA1 (aa 18-346)(A/Hong Kong/156/97)(H5N1)
IA-0057-005P	HA1 (aa 17-346)(A/Hong Kong/483/97)(H5N1)
IA-H5-519P	HA1 (aa 18-341)(A/Hubei/1/2010)(H5N1)
IA-H5-519WP	HA (aa 18-530)(A/Hubei/1/2010)(H5N1)
IA-0052-005P	HA (aa 18-530)(A/Indonesia/5/2005)(H5N1)
IA-H5-069P	HA (aa 1-530)(A/Indonesia/5/2005)(H5N1)
IA-023-005P	NP (A/Indonesia/5/2005)(H5N1)
IA-00514-005P	HA (aa 17-530)(A/Japanese white-eye/Hong Kong/1038/2006)(H5N1)
IA-005-005P	HA1 (aa 1-345)(A/Vietnam/1203/2004)(H5N1)
IA-0051-005P	HA (aa 18-530)(A/Vietnam/1203/2004)(H5N1)
IA-H5-0051t	HA trimer (aa 18-530)(A/Viet Nam/12303/2004)(H5N1)
IA-NA-VN04P	NA (aa 36-449)(A/Viet Nam/12303/2004)(H5N1)
IA-018W-005P	HA (aa 19-506)(A/American green-winged teal/California/HKWF609/07)(H5N2)
IA-019W-005P	HA (aa 18-500)(A/duck/Hokkaido/167/07)(H5N3)
IA-020W-005P	HA (aa 1-490)(A/duck/NY/191255-59/02)(H5N8)
IA-H5-058P	HA1 (aa 17-341)(A/gyrfalcon/Washington/41088-6/2014)(H5N8)
IA-021W-005P	HA (aa 17-529)(A/northern shoveler/California/HKWF115/07)(H6N1)
IA-008-005P	HA1 (aa 26-344)(A/chicken/Netherlands/1/03)(H7N7)
IA-008W-005P	HA (aa 17-527)(A/chicken/Netherlands/1/03)(H7N7)
IA-007W-005P	HA (aa 18-530)(A/England/268/96)(H7N7)
IA-H7-HK017P	HA1 (aa 19-339) (A/Hong Kong/125/2017)(H7N9)
IA-H7-009P	HA (aa 19-535) (A/Shanghai/02/2013)(H7N9)
IA-NA7-SH13P	NA (aa 36-465) (A/Shanghai/02/2013)(H7N9)
IA-H7-019P	HA (aa 19-535) (A/Wuxi/2/2013)(H7N9)
IA-010-005P	HA1 (aa 16-343) (A/pintail/Alberta/114/1979)(H8N4)
IA-009-005P	HA1 (aa 20-339)(A/guinea fowl/Hong Kong/WF10/99)(H9N2)
IA-009W-005P	HA (aa 18-530)(A/guinea fowl/Hong Kong/WF10/99)(H9N2)
IA-0091W-005P	HA (aa 19-530)(A/Hong Kong/1073/99)(H9N2)
IA-H9-094P	HA1 (aa 17-339)(A/Hong Kong/33982/2009)(H9N2)
IA-H9-094WP	HA (aa 17-523)(A/Hong Kong/33982/2009)(H9N2)
IA-012-005P	HA1 (aa 17-342) (A/duck/Yangzhou/906/2002)(H11N2)
IA-013-005P	HA1 (aa 17-342)(A/green-winged teal/ALB/199/1991)(H12N5)
IA-014W-005P	HA (aa 17-530)(A/black-headed gull/Netherlands/1/00)(H13N8)
IA-016W-005P	HA (aa 18-534)(A/duck/AUS/341/1983)(H15N8)
IA-017W-005P	HA (aa 16-530)(A/black-headed gull/Sweden/5/99)(H16N3)
IA-B3-005P	HA (aa 17-546)(B/Brisbane/60/2008)
IB-HA1-608P	HA1 (aa 16-363)(B/Brisbane/60/2008)
IB-HA2-608P	HA1 (aa 361-547)(B/Brisbane/60/2008), hFc tag
IB-HA2-2608P	HA1 (aa 361-547)(B/Brisbane/60/2008), HSA/6xHis tag

INFLUENZA VIRUS cDNA CLONES

<i>Catalog Number</i>	<i>Product Description</i>
IB-HA-C17P	HA (aa 16-546)(B/Colorado/06/2017)
IB-NA-C17P	NA (aa 37-466)(B/Colorado/06/2017)
IA-B2-005P	HA (aa 11-546)(B/Florida/4/2006)
IB-HA-M04P	HA (aa 11-542)(B/Malaysia/2506/2004)
IA-BW7-005WP	HA (aa 16-548)(B/Massachusetts/02/2012)
IB-HA-P13P	HA (aa 16-546)(B/Phuket/3073/2013)
IB-HA-W19WP	HA (aa 16-543)(B/Washington/02/2019)(B/Victoria lineage)-like virus
IA-BW5-005P	HA (aa 16-546)(B/Wisconsin/01/2010)

1.6. Codon optimized cDNA clone for influenza A/B viruses

<i>Catalog Number</i>	<i>Product Description</i>
HA-1005	Swine Flu H1N1 hemagglutinin (A/California /04/2009) cDNA clone
HA-3000	H3N2 hemagglutinin (A/Hong Kong/68) cDNA clone
HA-3032	H3N2 hemagglutinin (A/Udorn/72) cDNA clone
HA-3079	H3N2 hemagglutinin (A/Aichi/2/1968) cDNA clone
HA-5069	H5N1 hemagglutinin (A/Indonesia/5/2005) cDNA clone
HA-5088	H5N1 hemagglutinin (A/Hong Kong/156/97) cDNA clone
HA-7902	H7N9 hemagglutinin (A/Shanghai/2/2013) cDNA clone
HA-B036	Hemagglutinin (B/ Massachusetts/02/2012) cDNA clone
HA-B380	Hemagglutinin (B/Brisbane/60/2008) cDNA clone
HA-C359	H1N1 hemagglutinin (aa1-566) (A/California/07/09) cDNA clone
HA-N639	H7N7 Hemagglutinin (A/Chicken/Netherlands/1/03) cDNA clone
HA-P342	H3N2 hemagglutinin (aa1-566) (A/Perth/16/09) cDNA clone
HA-T219	H3N2 hemagglutinin (A/Texas/50/2012)(H3N2) cDNA clone
HA-V328	H3N2 hemagglutinin (A/Victoria/361/2011) cDNA clone
NA-3073	H3N2 neuraminidase (A/Brisbane/10/2007) cDNA clone
NA-5023	H5N1 neuraminidase (A/Vietnam/1203/2004) cDNA clone

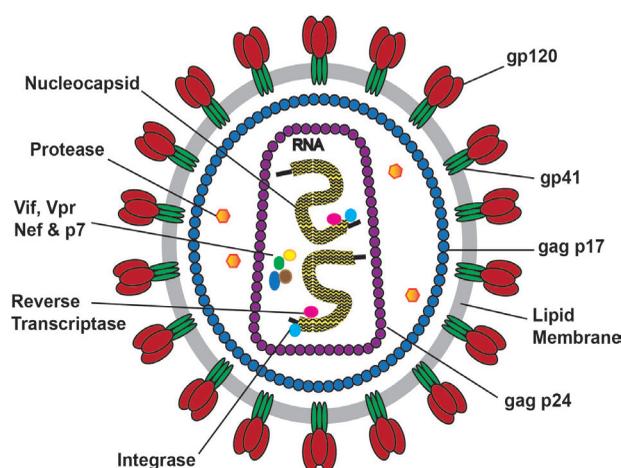
2. HIV/SIV

The human immunodeficiency virus (HIV) is a lentivirus (slowly-replicating retrovirus) that causes acquired immunodeficiency syndrome (AIDS), an infectious disease in which progressive failure of the human immune system leads to life-threatening opportunistic infections and/or cancer. Two types of HIV have been characterized: HIV-1 and HIV-2. HIV-1 is the virus that was initially discovered and termed both LAV and HTLV-III. It is more virulent, more infective, and is the cause of the majority of HIV infections globally.

Both HIV-1 and HIV-2 are believed to have originated in non-human primates in West-central Africa through the evolution of a simian immunodeficiency virus (SIV) that infects wild chimpanzees.

Three groups of HIV-1 have been identified on the basis of differences in the envelope (*env*) region: M, N, O, and P. Group M is the most prevalent and is further subdivided into at least 11 subtypes/clades (A, B, C, D, E, F, G, H, I, J, K) and other “circulating recombinant forms” from recombination between viruses of different subtypes.

HIV-1 viral particles have a diameter of 100 nm and are surrounded by a lipoprotein membrane. Each viral particle contains 72 glycoprotein complexes that are integrated into this lipid membrane, and each of the glycoprotein complexes is composed of trimers of an external glycoprotein gp120 and a transmembrane spanning protein gp41. The bonding between gp120 and gp41 is loose and gp120 may shed spontaneously in the local environment. gp120 may also be detected in the serum as well as within the lymphatic tissue of HIV-infected patients. The matrix protein p17 is anchored to the inside of the viral lipoprotein membrane. The p24 core antigen contains two copies of HIV-1 RNA. The HIV-1 RNA is part of a protein-nucleic acid complex, which is composed of the nucleoprotein p7 and the reverse transcriptase p66 (RT).



The viral particle contains all the enzymatic equipment that is necessary for replication: a reverse transcriptase (RT), an integrase p32 and a protease p11.

The HIV-1 RNA genome consists of at least seven structural landmarks (LTR, TAR, RRE, PE, SLIP, CRS, and INS), and nine genes (*gag*, *pol*, and *env*, *tat*, *rev*, *nef*, *vif*, *vpr*, *vpu*, and sometimes a tenth *tev*, which is a fusion of *tat*, *env* and *rev*), encoding 19 proteins. Three of these genes, *gag*, *pol*, and *env*, contain the information needed to make the structural proteins for new virus particles. For example, *env* codes for a protein called gp160 that is broken down by a cellular protease to form gp120 and gp41. The remaining six genes, *tat*, *rev*, *nef*, *vif*, *vpr*, and *vpu* (or *vpx* in the case of HIV-2), are regulatory genes for the proteins that control the ability of HIV’s infecting cells, producing new copies of virus (replication), or causing disease.

2.1. Antibodies for HIV/SIV viruses

Catalog Number	Product Description	Host/Type
IV-001-0100	Anti-gp120/160 (HIV-1/Clade A) pAb	Rabbit/IgG
IV-002-0100	Anti-gp120 (Clade B) pAb	Rabbit/IgG
IV-003-0100	Anti-gp120 (Clade C) pAb	Rabbit/IgG
IV-005-0100	Anti-gp41 (Clade B) pAb	Rabbit/IgG
IV-006-0100	Anti-gp41 (Clade C) pAb	Rabbit/IgG

HIV/SIV RESEARCH ANTIBODIES/PROTEINS

IV-007-0100	Anti-Gag (HIV-1/Clade A) pAb	Rabbit/IgG
IV-007A-0100	Anti-Gag (Pan) pAb	Rabbit/IgG
IV-008-0100	Anti-Gag (HIV-1/Clade B) pAb	Rabbit/IgG
IV-013-0100	Anti-Nef (HIV-1/Clade A) pAb	Rabbit/IgG
IV-014-0100	Anti-Nef (Clade B) pAb	Rabbit/IgG
IV-016-0100	Anti-p24 (HIV-1/Clade A) pAb	Rabbit/IgG
IV-017-0100	Anti-p24 (HIV-1/Clade B) pAb	Rabbit/IgG
IV-018-0100	Anti-p24 (HIV-1/Clade C) pAb	Rabbit/IgG
IV-022-0100	Anti-gp120/160 (SIV/mac239) pAb	Rabbit/IgG
IV-025-0100	Anti-Pol (SIV/mac239) pAb	Rabbit/IgG
IV-026-0100	Anti-Nef (SIV-1/mac239) pAb	Rabbit/IgG
IV-027-0100	Anti-p24 (SIV/mac239) pAb	Rabbit/IgG
IV-051-0100	Anti-Human PD-1 pAb	Rabbit/IgG
IV-317-0100	Anti-Human CD317 pAb	Rabbit/IgG
IV-0011-0100	Anti-gp120/160 (HIV-1/Pan) pAb	Rabbit/IgG
MIV-0021	Anti-gp120 (HIV-1/Clade B) mAb, clone IT-6V81	Mouse/IgG1
MIV-GP120-151	Anti-HIV-1 gp120 mAb, clone PS-B12	Mouse/IgG1
MIV-GP39-153	Anti-HIV-2 gp39 mAb, clone GP-39	Mouse/IgG1
MIV-GP41-159	Anti-HIV-1 gp41 mAb, clone GP-41	Mouse/IgG1
MIV-P24-152	Anti-HIV-1 p24 mAb, clone PS-C23	Mouse/IgG1

2.2. Recombinant proteins for HIV/SIV viruses

<i>Catalog Number</i>	<i>Product Description</i>
IV-001-005P	gp120 (92RW020) (HIV-1/Clade A) (aa 32-494)
IV-0011-005P	gp140 (HIV-1/Clade A) (aa 24-680)
IV-002-005P	gp120 (HIV-1/Clade B) (aa 24-518)
IV-0021-005P	gp140 (HIV-1/Clade B) (aa 22-680)
IV-0022-005P	gp120 (HXBc2) (HIV-1/Clade B) (aa 34-518)
IV-0023-005P	gp120 (ADA) (HIV-1/Clade B) (aa 34-518)
IV-0024-005P	gp120 (JRFL) (HIV-1/Clade B) (aa 34-518)
IV-0025-005P	gp120 (JRC5F) (HIV-1/Clade B) (aa 30-503)
IV-0026-005P	gp120 (89.6P) (HIV-1/Clade B) protein (aa 34-518)
IV-0027-005P	gp120 (YU2) (HIV-1/Clade B) protein (aa 34-518)
IV-0029-005P	gp120 (R2) (HIV-1/Clade B) protein (aa 41-520)
IV-002MN-005P	gp120 (MN) (HIV-1/Clade B) (aa 30-513)
IV-003-005P	gp120 (HIV-1/Clade C) (aa 24-515)
IV-0031-005P	gp140 (HIV-1/Clade C) protein (aa 24-680)
IV-005-005P	gp41 (HIV-1/HXBc2) (aa 534-681)
IV-017-005P	p24 (HIV-1/HXBc2)
IV-202-005P	gp120 (HIV-2/NIH-Z) protein (aa 23-501)
IV-317-005P	ectodomain of human CD317 (Tetherin) protein (aa 24-162)

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IV-CD4-005P	Human CD4 protein (aa 1-398)
IV-CD8A-005P	Human CD8A protein (aa 22-182)
IV-CRF-152P	gp120 (HIV-1/Subtype CRF01_AE/90TH_CM244) (aa 30-503)
IV-CRF-153P	gp120 (HIV-1/Subtype CRF02_AG/98US_MSC5007) (aa 29-501)
IV-CRF-166P	gp120 (HIV-1/Subtype CRF07_BC/CH181) (aa 32-515)
IV-CRF-171P	gp140 (HIV-1/Subtype CRF01_AE)(CM235) (aa 30-667), HIV-1 subtypes B and E (CRF01_AE)
IV-CRF-172P	gp120 (HIV-1/Subtype CRF01_AE)(CM235) (aa 35-501)
IV-mCD8A-005P	Mouse CD8A protein (aa 28-196)
IV-RB10-005P	HIV-1 gp120 (pTHRO4156) (Clade B) protein (aa 34-518)
IV-RB1-005P	HIV-1 gp120 (6535) (Clade B) protein (aa 34-518)
IV-RB11-005P	HIV-1 gp120 (pCAAN5342) (Clade B) protein (aa 34-518)
IV-RB12-005P	HIV-1 gp120 (SC422661.8) (Clade B) protein (aa 34-518)
IV-RB2-005P	HIV-1 gp120 (QH0692) (Clade B) protein (aa 34-518)
IV-RB3-005P	HIV-1 gp120 (PVO) (Clade B) protein (aa 34-518)
IV-RB5-005P	HIV-1 gp120 (AC10.0) (Clade B) protein (aa 36-514)
IV-RB6-005P	HIV-1 gp120 (pWITO4160) (Clade B) protein (aa 32-505)
IV-RB7-005P	HIV-1 gp120 (pTRJO4551) (Clade B) protein (aa 38-512)
IV-RB8-005P	HIV-1 gp120 (pREJO4541) (Clade B) protein (aa 34-518)
IV-RB9-005P	HIV-1 gp120 (pRHPA4259) (Clade B) protein (aa 34-518)
IV-RC10-005P	HIV-1 gp120 (ZM135M.PL10a) (Clade C) protein (aa 35-502)
IV-RC1-005P	HIV-1 gp120 (Du156.12) (Clade C) protein (aa 40-505)
IV-RC11-005P	HIV-1 gp120 (CAP45.2.00) (Clade C) protein (aa 34-518)
IV-RC12-005P	HIV-1 gp120 (CAP210.2.00) (Clade C) protein (aa 40-513)
IV-RC2-005P	HIV-1 gp120 (Du172.17) (Clade C) protein (aa 40-508)
IV-RC3-005P	HIV-1 gp120 (Du422.1) (Clade C) protein (aa 40-506)
IV-RC4-005P	HIV-1 gp120 (ZM197M.PB7) (Clade C) protein (aa 33-525)
IV-RC5-005P	HIV-1 gp120 (ZM214M.PL15) (Clade C) protein (aa 40-510)
IV-RC6-005P	HIV-1 gp120 (ZM233M.PB6) (Clade C) protein (aa 41-490)
IV-RC7-005P	HIV-1 gp120 (ZM249M.PL1) (Clade C) protein (aa 28-501)
IV-RC8-005P	HIV-1 gp120 (ZM53M.PB12) (Clade C) protein (aa 46-490)
IV-RC9-005P	HIV-1 gp120 (ZM109F.PB4) (Clade C) protein (aa 40-489)
IV-rhCD4-005P	rhesus macaque CD4 protein (aa 1-398)
SIV-011-005P	SIV gp120 (SIV/mac251) (aa 31-528)
SIV-012-005P	SIV gp120 (Isolate SIVmac251v31523ru28) (aa 31-528)
IV-022-005P	SIV gp120 (SIV/mac239) (aa 34-518)

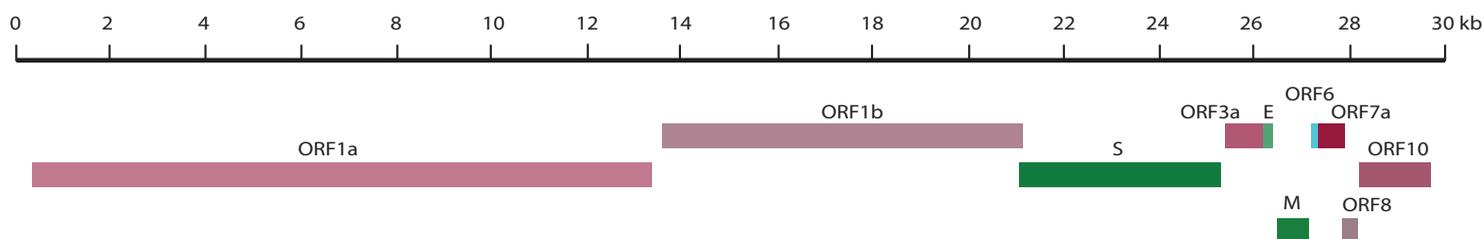
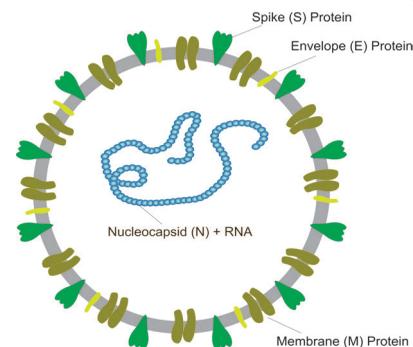
2.3. Codon optimized cDNA clones for HIV/SIV viruses

<i>Catalog Number</i>	<i>Product Description</i>
HIV-0023	HIV-1 gp120 (ADA)(Clade B) cDNA Clone
HIV-0024	HIV-1 gp120 (JRFL) (Clade B) cDNA Clone

3. Coronavirus

SARS-CoV-1, MERS-CoV and SARS-CoV-2 belong to the subfamily of Coronaviruses. SARS-CoV-2 is a novel human pathogen that spread into a pandemic COVID-19 that has caused a large number of deaths worldwide and immense economic damage since the start of the outbreak in late 2019.

Coronaviruses contain a positive-sense, single-stranded RNA genome. The genome size ranges from 26.4 to 31.7 kilobases and is among the largest RNA viruses. The genome is polycistronic with a large pre-polypeptide translated that is processed by proteolytic cleavage to most of the viral structural and proteolytic processing proteins. Of particular interest is the Spike (S) protein that mediates cell entry and gives the virus its typical “corona” around the viral envelope in which it is embedded when visualized under EM.



SARS-CoV-2 Genome Organization (GenBank MN908947)

The ORFs 1a and 1b encode the replicase polyprotein (pp1ab). The replicase polyprotein self cleaves to form 16 nonstructural proteins (nsp1–nsp16). The later ORFs encode the four major structural proteins: spike, envelope, membrane, and nucleocapsid. Interspersed between these ORFs are the ORFs for the accessory proteins. The number of accessory proteins and their function is unique depending on the specific coronavirus.

SARS-CoV-2 is a 125nm-diameter, spherical-shaped beta-coronavirus. It has four structural proteins, known as the S (spike), E (envelope), M (membrane), and N (nucleocapsid) proteins; the N protein holds the RNA genome, and the S, E, and M proteins together create the viral envelope.

3.1. Antibodies for Coronavirus

Catalog Number	Product Description	Host/Type
SS-001-0100	Anti-Spike (SARS-CoV) polyclonal antibody	Rabbit/IgG
SS-005-0100	Anti-E (SARS-CoV) (Beijing02) polyclonal antibody	Rabbit/IgG
SS-006-0100	Anti-NP (SARS-CoV) (Beijing02) polyclonal antibody	Rabbit/IgG
SCV-S-001	Anti-Spike (aa 19-48)(SARS-CoV) Rabbit Polyclonal Antibody	Rabbit/IgG
SCV-S-005	Anti-Spike (aa 278-312)(SARS-CoV) Rabbit Polyclonal Antibody	Rabbit/IgG
SCV-S-006	Anti-Spike (aa 368-419)(SARS-CoV) Rabbit Polyclonal Antibody	Rabbit/IgG
SCV-S-007	Anti-Spike (aa 450-479)(SARS-CoV) Rabbit Polyclonal Antibody	Rabbit/IgG
SCV-E-001	Anti-E (aa 48-76)(SARS-CoV) Rabbit Polyclonal Antibody	Rabbit/IgG
SCV-M-001	Anti-M (aa 4-26)(SARS-CoV) Rabbit Polyclonal Antibody	Rabbit/IgG

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SCV-M-002	Anti-M (aa 132-161)(SARS-CoV) Rabbit Polyclonal Antibody	Rabbit/IgG
NCV-M-005	Anti-M (SARS-CoV-2/COVID-19) Rabbit Polyclonal Antibody	Rabbit/IgG
SCV2-M-100	Anti-M (SARS-CoV-2) Rabbit Polyclonal Antibody	Rabbit/IgG
SCV2-S-100	Anti-Spike Protein (SARS-CoV-2) Polyclonal Antibody	Rabbit/IgG
SCV2-S-300	Anti-Spike Protein (SARS-CoV-2) Polyclonal Antibody	Rabbit/IgG
SCV2-BeMab	Anti-SARS-CoV-2) Antibody (Biosimilar Research Grade Bebtelovimab)	Rabbit/IgG
SCV2-RBD-01m	Anti-Spike RBD Domain (SARS-CoV-2) Monoclonal Antibody	Mouse/IgG1
SCV2-S1-21m	Anti-Spike (SARS-CoV-2) Mouse Monoclonal Antibody	Mouse/IgG1
SCV2-RBD-100m	Anti-Spike RBD Domain (SARS-CoV-2) Human Monoclonal Antibody	Human/IgG1
SCV2-RBD-200m	Anti-RBD Domain (SARS-CoV-2/COVID-19) Human Monoclonal Antibody	Human/IgG1
SCV2-SA-11m	Anti-Spike (SARS-CoV-2/South Africa variant) Neutralization Antibody	Human/IgG1
SCV2-RBD-OM100	Anti-Spike (SARS-CoV-2/Omicron variant) Neutralization Antibody	Human/IgG1
SCV2-RBD-h12	Anti-S1 (SARS-CoV-2) human neutralizing mAb	Human/IgG1
SCV2-RBD-h26	Anti-Spike RBD (SARS-CoV-2) human mAb, clone# S309	Human/IgG1
SCV2-S1-h22	Anti-Spike S1 (SARS-CoV-2) human mAb	Human/IgG1
SCV2-S1-h25	Anti-Spike S1 (SARS-CoV-2) human mAb, IgM	Human/IgM
SCV2-NP-100	Anti-NP (SARS-CoV-2) Rabbit Polyclonal Antibody	Rabbit/IgG
MERS-S1-015	Anti-S1 (MERS-CoV) Rabbit Polyclonal Antibody	Rabbit/IgG
MERS-S1-020	Anti-S1 (MERS-CoV) Rabbit Polyclonal Anti-serum	Rabbit/IgG
MERS-S1-001	Anti-S1 (MERS-CoV/HCoV-EMC/2012) mAb, clone IT-A11	Mouse/IgG1
MERS-S1-005	Anti-S1 (MERS-CoV/HCoV-EMC/2012) mAb, clone IT-D7	Mouse/IgG1
MERS-S1-006	Anti-S1 (MERS-CoV/HCoV-EMC/2012) mAb, clone IT-B7	Mouse/IgG1

3.2. Recombinant proteins for Coronavirus

<i>Catalog Number</i>	<i>Product Description</i>
SS-001-005P	Spike protein (aa 1-1190)(SARS-CoV/Beijing02)
SCV-RBD-035P	Spike RBD domain protein (SARS-CoV), 6x his-tag
SCV2-RBD-060P	Spike RBD domain protein (SARS-CoV-2/COVID-19), hFc-tag
SCV2-RBD-050P	Spike RBD domain protein (SARS-CoV-2/COVID-19), 6x his-tag
SCV2-RBD-IN2P	Spike RBD (SARS-CoV-2) protein, Delta variant (Indian B.1.617.2) (L452R, T478K)
SCV2-RBD-OmicronP	Spike RBD (SARS-CoV-2) protein, Omicron variant (lineage B.1.1.529)
SCV2-RBD-UK50p	Spike RBD (SARS-CoV-2) protein (UK variant)
SCV2-RBD-SA50p	Spike RBD (SARS-CoV-2) protein (South Africa variant)
SCV2-RBD-BR50p	Spike RBD (SARS-CoV-2) protein (Brazil variant)
SCV2-RBD-IN50p	Spike RBD (SARS-CoV-2) protein (Indian B.1.617 variant)
SCV2-RBD-Delta2P	Spike RBD (SARS-CoV-2) protein, Delta Plus variant (K417N, T478K, L452R)
SCV2-RBD-E484Kp	Spike RBD(E484K) (SARS-CoV-2) protein
SCV2-RBD-L452Rp	Spike RBD(L452R) (SARS-CoV-2) protein
SCV2-RBD-S477Np	Spike RBD(S477N) (SARS-CoV-2) protein
SCV2-S1-150P	S1 protein (SARS-CoV-2/COVID-19), 6x his-tag
SCV2-S1-SAp	S1 Protein (SARS-CoV-2/South Africa variant)

CORONAVIRUS RESEARCH TOOLS

SCV2-S1-614G	S1 Protein (SARS-CoV-2/D614G)
SCV2-S1-UKp	S1 Protein (SARS-CoV-2 UK Variant B.1.1.7)
SCV2-S-050P	Spike protein (SARS-CoV-2/COVID-19), 6x his-tag
SCV2-M-050P	M protein (SARS-CoV-2/COVID-19), 6x his-tag
SCV2-E-050P	E protein (SARS-CoV-2/COVID-19), 6x his-SUMO tag
SCV2-NP-050P	Nucleocapsid protein (SARS-CoV-2/COVID-19), 6x his-tag
MERS-S1-005P	Spike (S1) Protein (aa 1-725) of MERS CoV
MERS-RBD-005P	Receptor binding domain of MERS CoV spike protein (aa 367-588)
hACE2-050P	Human ACE2 protein

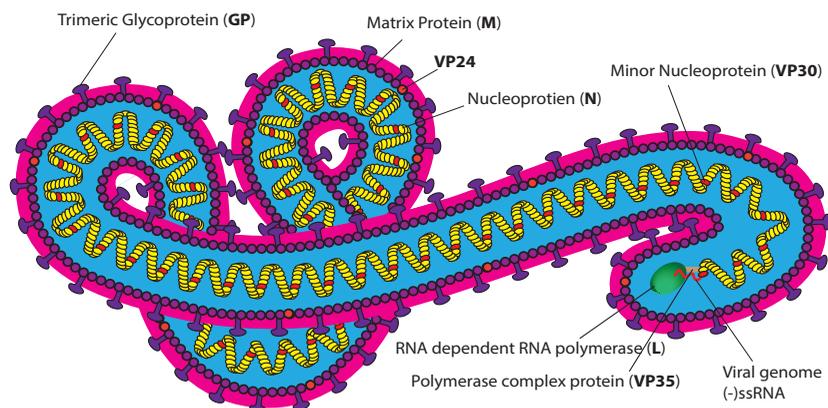
3.3. Cell lines and pseudoviruses for Coronavirus

<i>Catalog Number</i>	<i>Product Description</i>
SCV2-PsV-001	SARS-CoV-2 pseudoviral particles, 2x 5 mL
SCV2-PsV-0011	SARS-CoV-2 Pseudoviral Particles, 5x 1 mL
SCV2-PsV-614G	SARS-CoV-2 (D614G) pseudoviral particles, 2x 5 mL
SCV2-PsV-226V	SARS-CoV-2 (A226V) Pseudoviral Particles, 2x 5 mL
SCV2-PsV-453F	SARS-CoV-2 (D614G) Pseudoviral Particles, D614G-Y453F, 2x 5 mL
SCV2-PsV-BR	SARS-CoV-2 Pseudoviral Particles, Gamma Variant (Brazil P.1), 2x 5 mL
SCV2-PsV-Delta	SARS-CoV-2 Pseudoviral Particles, Delta Variant (Indian B.1.617.2), 2x 5 mL
SCV2-PsV-IN	SARS-CoV-2 Pseudoviral Particles (Indian B.1.617 variant), 2x 5 mL
SCV2-PsV-Lambda	SARS-CoV-2 Pseudoviral Particles, Lambda Variant (Lineage C.37), 2x 5 mL
SCV2-PsV-Omicron	SARS-CoV-2 Pseudoviral Particles, Omicron Variant (Lineage B.1.1.529), 2x 5 mL
SCV2-PsV-OmiBA2	SARS-CoV-2 Pseudoviral Particles, Omicron BA.2 Variant, 2x 5 mL
SCV2-PsV-SA	SARS-CoV-2 Pseudoviral Particles, Beta Variant (South Africa B.1.351), 2x 5 mL
SCV2-PsV-UK	SARS-CoV-2 (UK variant) Pseudoviral Particles, 2x 5 mL
SCV2-PsV-SA	SARS-CoV-2 (South Africa variant) Pseudoviral Particles, 2x 5 mL
PsV-001	MLV-Luciferase Pseudoviral Particles without spike protein (negative control), 2x 1.5 mL
SCV1-PsV-003	SARS Coronavirus (BJ02) Pseudoviral Particles, 2x 5 mL
MERS-PsV-001	MERS-CoV Pseudoviral Particles, 2x 5 mL
CL-AT1R-001	Human Angiotensin II Receptor Type 1 (AGTR-1, AT1R) Stable Cell Line
CL-hACE2-001	Human Angiotensin-Converting Enzyme 2 (hACE2) Stable Cell Line, with GFP
CL-hACE2-002	Human angiotensin-converting enzyme 2 (hACE2) stable cell line
CL-NRP1-001	Human Neuropilin-1 (NRP-1) Stable Cell Line
CL-TMPRSS2-001	Human Transmembrane Serine Protease 2 (TMPRSS2) Stable Cell Line

EBOLAVIRUS RESEARCH ANTIBODIES/PROTEINS

4. Ebolavirus

Ebola, which first appeared in outbreaks in Sudan and DR Congo in 1976, is a severe and often fatal disease caused by infection with a strain of Ebola virus. The 2014 Ebola epidemic is the largest in history, affecting multiple countries in West Africa. The genus Ebolavirus is a virological taxon included in the family Filoviridae.



The Ebolavirus genome is a single-stranded 19 kb negative-sense RNA. It encodes seven structural proteins: nucleoprotein (NP), polymerase cofactor (VP35), (VP40), GP, transcription activator (VP30), VP24, and RNA-dependent RNA polymerase (L).

4.1. Antibodies for Ebolavirus

Catalog Number	Product Description	Host/Type
MEB-31-018	Anti-Ebolavirus (Zaire strain) mAb, clone 18A	Mouse/IgG2a
MEB-31-037	Anti-Ebolavirus (Zaire strain) mAb, clone 37B	Mouse/IgG2a
ZEB-GP-001	Anti-GP (Zarie Ebolavirus/Mayinga 1976) polyclonal antibody	Rabbit/IgG
ZEB-GP-005	Anti-GP (Zarie Ebolavirus 2014) polyclonal antibody	Rabbit/IgG
ZEB-GP-105	Anti-GP (Zarie Ebolavirus 2014) polyclonal antisera	Rabbit/Serum
ZEB-NP-011	Anti-NP (Zarie Ebolavirus/Mayinga 1976) polyclonal antibody	Rabbit/IgG

4.2. Recombinant proteins for Ebolavirus

Catalog Number	Product Description
ZEB-GP-006P	GPΔMLD (aa 33-632, deletion of aa 311-463) of Zaire ebolavirus (isolate H.sapiens-wt/GIN/2014/Gueckedou-C07)
ZEB-GP-015P	GP protein (aa 33-632) of Zaire ebolavirus (isolate H.sapiens-wt/GIN/2014/Gueckedou-C07)
SEB-GP-020P	GP protein (aa 33-632) of Sudan ebolavirus
ZEB-NP-022P	NP protein (aa 396-738) of Zaire ebolavirus (isolate H. sapiens-wt/GIN/2014/Kissidougou-C15)

HEPATITIS VIRUS RESEARCH ANTIBODIES

5. Hepatitis Viruses

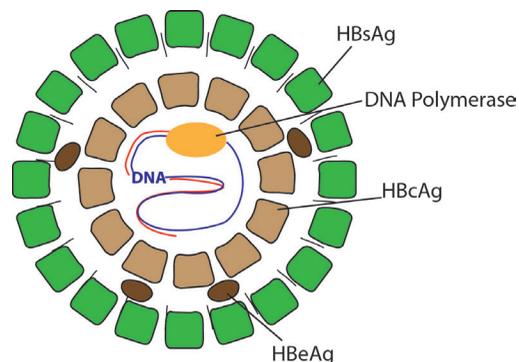
Hepatitis is an inflammation of the liver. Hepatitis viruses are the most common cause of hepatitis in the world but other infections, toxic substances (e.g. alcohol, certain drugs), and autoimmune diseases can also cause hepatitis. There are 5 main hepatitis viruses, referred to as types A, B, C, D and E. The most common hepatitis viruses are types A, B, and C. All hepatitis viruses are RNA viruses except for Hepatitis B virus (HBV).

Hepatitis A virus (HAV), classified as hepatovirus, is a small, unenveloped symmetrical RNA virus which shares many of the characteristics of the picornavirus family, and is the cause of infectious or epidemic hepatitis transmitted by the fecal-oral route.

HBV is a member of the hepadnavirus family. The virus particle (virion) consists of a host cell-derived outer lipid envelope and an icosahedral nucleocapsid core composed of protein. HBV genome is a partially double-stranded DNA and forms a circle of around 3.2 kb. It contains at least four different open reading frames (called C, X, P, and S), coding for the viral HBcAg and HBeAg antigens, the regulatory protein HBx, polymerase, and surface antigen HBsAg.

Hepatitis C virus (HCV), is an enveloped single-stranded RNA virus which appears to be distantly related (possibly in its evolution) to flaviviruses.

Hepatitis C virus is associated with chronic liver disease and also with primary liver cancer in some countries.



5.1. Antibodies for Hepatitis viruses

<i>Catalog Number</i>	<i>Product Description</i>	<i>Host/Type</i>
HBV-S08-0100	Anti-HBsAg (Recombivax HB) polyclonal antibody	Rabbit/IgG
HV-0011-0100	Anti-HBsAg (Pre-S2 Specific) polyclonal antibody	Rabbit/IgG
HV-002-0100	Anti-HBcAg (HBV) polyclonal antibody	Rabbit/IgG
HV-003-0100	Anti-HBeAg (HBV) polyclonal antibody	Rabbit/IgG
HV-004-0100	Anti-E1 (HCV) polyclonal antibody	Rabbit/IgG
HV-005-0100	Anti-E2 (HCV) polyclonal antibody	Rabbit/IgG
HV-011-0100	Anti-VP1 (HAV) polyclonal antibody	Rabbit/IgG
HV-012-0100	Anti-VP3 (HAV) polyclonal antibody	Rabbit/IgG
HV-013-0100	Anti-VP4 (HAV) polyclonal antibody	Rabbit/IgG
MHA-318-001	Anti-Hepatitis A antigen mAb, clone MK01	Mouse/IgG3
MHB-312-033	Anti-Hepatitis B virus surface antigen mAb, clone Hbs33	Mouse/IgG2a
MHB-312-041	Anti-Hepatitis B virus Surface Antigen, mAb, clone Hbs41	Mouse/IgG1
MHB-317-034	Anti-Hepatitis B virus core antigen mAb, clone H3A4	Mouse/IgG2a
MHB-324-003	Anti-Hepatitis B virus "e" antigen mAb, clone HBe3	Mouse/IgG2a
MHB-S012	Anti-HbsAg monoclonal antibody, mAb, clone IT-34E1	Mouse/IgG1
MHB-S105	Anti-HBsAg mAb, clone HbsM2	Mouse/IgG1

HEPATITIS VIRUS RESEARCH PROTEINS

5.2. Recombinant proteins for Hepatitis viruses

Catalog Number	Product Description
HBS-870-005P	HBsAg <i>ayw</i> , Hepatitis B surface antigen <i>Ayw</i> subtype, <i>Saccharomyces</i>
HBS-871-005P	HBsAg <i>preS1</i> , Hepatitis B surface antigen (119 aa), <i>E.coli</i>
HBS-872-005P	HBsAg <i>adw</i> , Hepatitis B surface antigen <i>Adw</i> subtype, <i>Pichia Pastoris</i>
HBS-874-005P	HBsAg <i>preS2</i> , Hepatitis B surface antigen (55 aa), <i>E.coli</i>
HBS-875-005P	HBsAg <i>adr</i> , Hepatitis B surface antigen <i>adr</i> subtype, CHO
HBV-232-005P	HBV core recombinant protein (aa 1-186), <i>E.coli</i>
HBV-S-005P	HBV Pre-S recombinant protein (aa 1-174), <i>E.coli</i>
HBV-E-005P	HBeAg recombinant protein (aa 1-212), <i>E.coli</i>
HBV-C-005P	HBcAg recombinant protein (aa 1-149), <i>E.coli</i>
HBV-X-005P	HBV X recombinant protein (aa 1-154), <i>E.coli</i>
HCV-E2-015P	HCV E2 protein (aa 383-663), subtype 1a, <i>Hek293</i>
HV-005-005P	E2 (HCV) (aa 383-663), <i>Hek293</i>

RESEARCH ANTIBODIES/PROTEINS FOR OTHER PATHOGENS

6. Other Viruses

<i>Catalog Number</i>	<i>Product Description</i>	<i>Host/Type</i>
Adenovirus		
MAV-313-084	Anti-Adenovirus hexon monoclonal antibody, clone 8C4	Mouse/IgG2a
MAV-313-711	Anti-Adenovirus hexon monoclonal antibody, clone 7C11	Mouse/IgG2a + IgM
Aflatoxin (<i>Aspergillus flavus</i>)		
MAF-B12-37	Anti-Aflatoxin B1/B2 monoclonal antibody, clone A37	Rat/IgG1
Borrelia burgdorferi		
BB-VISE-005P	VlsE Protein of <i>Borrelia burgdorferi</i>	<i>E. coli</i>
Bunyaviridae		
PV-GP-40P	Membrane glycoprotein G1 of Phlebovirus (SFTS virus HN6)	293 cells
PV-GP-50P	Membrane glycoprotein G2 of Phlebovirus (SFTS virus HN6)	293 cells
Cholera toxin (<i>Vibrio cholerae</i>)		
MCT-24-008	Anti-Cholera toxin β -Subunit mAb, clone B8	Mouse/IgG1
MCT-24-009	Anti-Cholera toxin β -Subunit mAb, clone G9	Mouse/IgG1
Cytomeglovirus		
MCM-314-002	Anti-Cytomegalovirus mAb, clone B2	Mouse/IgG2a
Diphtheria toxin (<i>Corynebacterium diphtheriae</i>)		
MDT-213-001	Anti-Diphtheria toxin mAb, clone 2D1	Mouse/IgG2b
MDT-214-072	Anti-Diphtheria toxin mAb, clone 72F	Mouse/IgG1
Enterovirus		
EV-VP-10p	VP1 of human Enterovirus 71	<i>E. coli</i>
EV-VP-20p	VP2 of human Enterovirus 71	<i>E. coli</i>
EV-VP-30p	VP3 of human Enterovirus 71	<i>E. coli</i>
EV-VP-40p	VP4 of human Enterovirus 71	<i>E. coli</i>
Epstein barr virus		
MEB-320-011	Anti-Epstein barr virus mAb, clone 1H1	Mouse/IgG1
MEB-320-048	Anti-Epstein barr virus mAb, clone 4A8	Mouse/IgG2b
Foot-and-Mouth Disease virus		
MFM-32-012	Anti-NS (FMDV) mAb, clone 1G2-2	Mouse/IgG2a
MHB-32-014	Anti-NS (FMDV) mAb, clone 1H4-1	Mouse/IgG2a
MFM-32-022	Anti-FMDV mAb, clone 2D2-2	Mouse/IgG2a
MFM-32-038	Anti-FMDV mAb, clone 3G8-1	Mouse/IgG2a
Herpesvirus		
HS-001-0100	Anti-gD (HSV-1) pAb	Rabbit/IgG
HS-002-0100	Anti-gG (HSV-1) pAb	Rabbit/IgG
HS-010-0100	Anti-gG (HSV-2) pAb	Rabbit/IgG
HSV1-gC-533	Anti-gC (HSV-1) Mouse mAb, clone# IT-F1	Mouse/IgG1
HSV1-gD-545	Anti-gD (HSV-1) Mouse mAb, clone# IT-C10	Mouse/IgG1
HSV1-gHL-511	Anti-gH/gL complex (HSV-1) Mouse mAb, clone# IT-A3	Mouse/IgG1
HSV1-gD-541	Anti-gD (HSV-1/HSV-2) Mouse mAb, clone# IT-E3	Mouse/IgG1

RESEARCH ANTIBODIES/PROTEINS FOR OTHER PATHOGENS

Catalog Number	Product Description	Host/Type
HSV2-gB-125	Anti-gB (HSV-2) mAb, clone# IT-D7	Mouse/IgG2b
HSV2-gC-117	Anti-gC (HSV-2) mAb, clone# IT-M7	Mouse/IgG1
HSV2-gG-133	Anti-gG (HSV-2) mAb, clone# IT-A9	Mouse/IgG2a
HSV2-gHL-140	Anti-gH/gL complex (HSV-2) mAb, clone# IT-B5	Mouse/IgG1
HHV4-gHL42-310	Anti-gH/gL/gp42 Complex (EBV) mAb, clone# IT-D4	Mouse/IgG1
HHV4-gHL-308	Anti-gH/gL Complex (EBV) mAb, clone# IT-B10	Mouse/IgG1
HSV1-gD-005P	HSV-1 glycoprotein D (gD)	293 cells
HSV1-gE-005P	HSV-1 glycoprotein E (gE)	293 cells
HSV1-gG-005P	HSV-1 glycoprotein G (gG)	293 cells
HSV2-gC-005P	HSV-2 glycoprotein C (gC)	293 cells
HSV2-gD-005P	HSV-2 glycoprotein D (gD)	293 cells
HSV2-gG-005P	HSV-2 glycoprotein G (gG)	293 cells
HSV4-gH-005P	EBV (HHV-4) glycoprotein H (gH)	293 cells
HSV4-gH42-05P	EBV (HHV-4) gH/gp42 protein complex	293 cells
HSV4-gHL42-05P	EBV (HHV-4) gH/gL/gp42 protein complex	293 cells
Japanese encephalitis virus		
JEV-C-021P	Core protein C of Japanese encephalitis virus	<i>E.coli</i>
Malaria		
MAL-001-005P	Plasmodium falciparum HSP70 recombinant protein, <i>E.coil</i>	<i>E.coli</i>
MAL-002-005P	Plasmodium falciparum Cs mosaic recombinant protein, <i>E.coil</i>	<i>E.coli</i>
Newcastle Disease Virus		
MND-35-024	Anti-Newcastle disease virus mAb, clone 2H4	Mouse/IgM
MND-35-096	Anti-Newcastle disease virus mAb, clone 9C	Mouse/IgG2a
MND-35-097	Anti-Newcastle disease virus mAb, clone 9F7	Mouse/IgG1
MND-35-110	Anti-Newcastle disease virus mAb, clone 1C10	Mouse/IgG2a
MND-35-112	Anti-Newcastle disease virus mAb, clone 11F12	Mouse/IgG2a
MND-35-133	Anti-Newcastle disease virus mAb, clone 13H3	Mouse/IgG2a
Rabies Virus		
RA-G-005P	Glycoprotein (Rabies virus)	<i>E.coli</i>
RA-NP-005P	Nucleoprotein (Rabies virus)	<i>E.coli</i>
MRA-37-015	Anti-Rabies virus mAb, clone 015	Mouse/IgG2a
MRA-37-019	Anti-Rabies virus mAb, clone 019	Mouse/IgG2a
MRA-37-073	Anti-Rabies virus mAb, clone 073	Mouse/IgG2b
RA-001-0100	Anti-Ectodomain of glycoprotein (Rabies virus) pAb	Rabbit/IgG
Rotavirus		
MRV-310-310	Anti-Rotavirus group specific antigen mAb, clone 3C10	Mouse/IgG2a
Tetanus Toxin (<i>Clostridium tetani</i>)		
MTT-28-002	Anti-Tetanus toxin mAb, clone TetE3	Mouse/IgG1
MTT-28-003	Anti-Tetanus toxin mAb, clone TetG2	Mouse/IgG2a

RESEARCH ANTIBODIES/PROTEINS FOR OTHER VIRUSES

<i>Catalog Number</i>	<i>Product Description</i>	<i>Host/Type</i>
West Nile Virus		
WNV-E-001	Anti-E (West Nile virus) pAb	Rabbit/IgG
WNV-M-002	Anti-PreM (West Nile virus) pAb	Rabbit/IgG
WNV-NS-003	Anti-NS1 (West Nile virus) polyclonal antiserum	Rabbit
WN-001-005P	E (Ectodomain) (West Nile virus) protein (aa 291-696)	293 cells
WN-0011-005P	E (DIII) (WNV) (aa 590-696)	293 cells
WNV-002-005P	West Nile Virus Pre-M recombinant protein	<i>E.coli.</i>
WNV-NS-053P	NS1 protein of West Nile virus	293 cells
Zika Virus		
ZV-E-005P	Envelop glycoprotein E (aa 291-710) of Zika virus	<i>E.coli</i>
ZV-EG-50P	Envelop glycoprotein E (aa 291-710) of Zika virus	293 cell
ZV-NS1-50P	NS1 (Zika virus) protein	293 cells
ZV-E-0100	Anti-E (Zika virus) pAb	Rabbit/IgG
ZV-E-0105	Anti-E (Zika virus) polyclonal antiserum	Rabbit serum
ZV-NS1-11m	Anti-NS1 (Zika virus) antibody, clone IT-1E11	Mouse/IgG2a
ZV-NS1-15m	Anti-NS1 (Zika virus) antibody, clone IT-2C1	Mouse/IgG1

7. Virus cDNA Clones

- codon optimized for mammalian cell expression
- consensus Kozak sequence included
- expression confirmed with various tags in human 293 cells

<i>Catalog No.</i>	<i>Product Description</i>
HA-1005	Swine Flu H1N1 hemagglutinin (aa 1-530)(A/California /04/2009)
HA-3000	H3N2 hemagglutinin (aa 1-566)(A/Hong Kong/68)
HA-3032	H3N2 hemagglutinin (aa 1-566)(A/Udorn/72)
HA-3079	H3N2 hemagglutinin (aa 1-566)(A/Aichi/2/1968)
HA-5069	H5N1 hemagglutinin (aa 1-530)(A/Indonesia/5/2005)
HA-5088	H5N1 hemagglutinin (aa 1-568)(A/Hong Kong/156/97)
HA-7902	H7N9 hemagglutinin (aa 1-530)(A/Shanghai/2/2013)
HA-B036	Hemagglutinin (aa 16-548)(B/ Massachusetts/02/2012)
HA-B380	Hemagglutinin (aa 1-585) (B/Brisbane/60/2008)
HA-C359	H1N1 hemagglutinin (aa 1-566) (A/California/07/09)
HA-HK3214	H3N2 hemagglutinin (aa 17-529)(A/Hong Kong/4801/2014)
HA-J022	H2N2 hemagglutinin (aa 20-529)(A/Japan/305/1957)
HA-N639	H7N7 hemagglutinin (aa 28-527)(A/chicken/Netherlands/1/03)
HA-P342	H3N2 hemagglutinin (aa 1-566) (A/Perth/16/09)
HA-T219	H3N2 hemagglutinin (aa 17-529)(A/Texas/50/2012)
HA-V328	H3N2 hemagglutinin (aa 17-529)(A/Victoria/361/2011)
HA-W058	H5N8 HA1 (aa 17-341)(A/gyrfalcon/Washington/41088-6/2014)
HBV-S400	Hepatitis B virus large envelope protein
HCV-E21a	HCV E2 protein (aa 383-663), subtype 1a
HCV-E21b	HCV E2 protein, subtype 1b
HIV-0023	HIV-1 gp120 (aa 34-518)(ADA)(Clade B)
HIV-0024	HIV-1 gp120 (aa 34-512)(JRFL) (Clade B)
NA-3073	H3N2 neuraminidase (aa 1-439)(A/Brisbane/10/2007)
NA-5023	H5N1 neuraminidase (aa 1-439)(A/Vietnam/1203/2004)
ZEB-GP347	Zarie ebolavirus glycoprotein (aa 33-632)(isolate H.sapiens wt/GIN/2014/Gueckedou-C07)
ZEB-NP636	Zarie ebolavirus nucleoprotein (aa 396-738)(isolate H.sapiens-wt/GIN/2014/Kissidougou-C15)
ZK-E087	Zika virus envelop protein (aa 1-504)

ANTIBODIES/PROTEINS/ELISA ASSAY KITS

8. Miscellaneous Antibodies & Recombinant Proteins

<i>Catalog No.</i>	<i>Product Description</i>	<i>Host/Type</i>
Antibodies for Epitope Tags		
CB-H06m	Anti-HA tag mAb	Mouse/IgG2b
CB-M88m	Anti-Myc mAb	Mouse/IgG1
CB-V95r	Anti-V5 pAb	Rabbit/IgG
MA-102-0100	Anti-His Tag mAb	Mouse/IgG1
MFG-146-0100	Anti-FLAG mAb	Mouse/IgG1/k
MGT-164-0100	Anti-GST mAb	Mouse/IgG1
PA-000-0010	Anti-GFP pAb	Rabbit/IgG
PA-000-0011	Anti-Luciferase (Firefly) pAb	Rabbit/IgG
RA-C09-0100	Anti-C9 tag pAb	Rabbit/IgG
Other Proteins		
BM-001-005P	Human RBP4 protein (aa 19-201)	293 cells
CD-26-005P	Recombinant human CD26/DPPIV protein (aa 29-766)	293 cells
IV-CD8A-005P	Recombinant human CD8A protein (aa 22-182)	293 cells
IV-mCD8A-005P	Recombinant mouse CD8A Protein (aa 22-196)	293 cells
IV-rhCD4-005P	Recombinant rhesus macaque CD4 protein (aa 1-398)	293 cells

9. Assay Kits

<i>Catalog No.</i>	<i>Product Description</i>	<i>Size</i>
HIV-1 Virus		
CA-gp120A	Elite™ gp120 (HIV-1/Clade A) ELISA assay kit	200 assays
CA-gp120B	Elite™ gp120 (HIV-1/Clade B) ELISA assay kit	200 assays
Influenza A Virus		
CA-I179	Elite™ Hemagglutinin (H1N1)(A/California/07/09) ELISA assay kit	200 assays
CA-I307	Elite™ Hemagglutinin (H3N2)(A/Brisbane/10/2007) ELISA assay kit	200 assays
Others		
CA-M165	Elite™ Membrane Potential Dye Kit (Fluorescent)	10 plates
CA-N602	Elite™ neuraminidase activity assay kit (Blue Fluorescence)	200 assays
CA-C155	Elite™ non-wash calcium assay kit	1000 assays
CA-C135	Elite™ cAMP ELISA assay kit (Fluorescence)	1 plate
CA-M145	Elite™ mitochondrial membrane potential kit	1000 assays
CA-P217	Elite™ potassium ion channel assay kit	100 plates
CA-L165	Firefly luciferase assay kit	1 plate

eEnzyme LLC
401 Professional Drive, Suite 160
Gaithersburg, MD 20879, USA

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