Sino Biological

Influenza Antibody Directory

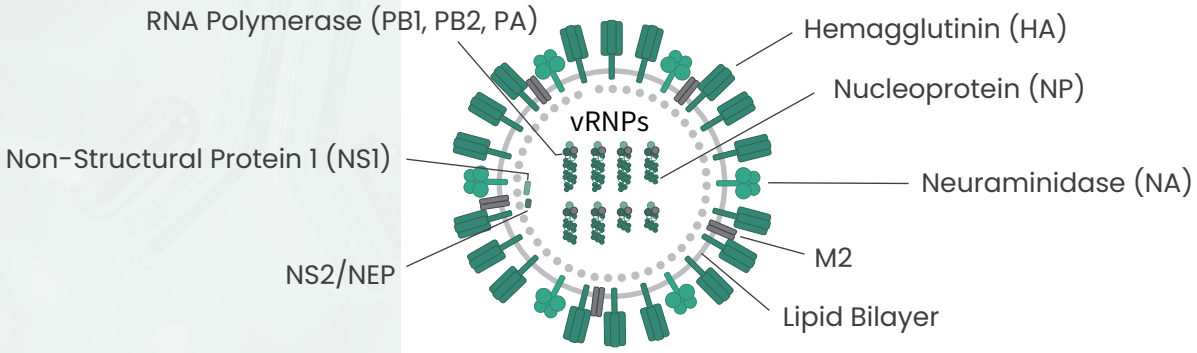
The Complete Guide to Choosing Antibodies for Influenza Research

The Complete Guide to Selecting the Proper Antibodies for Influenza Research

Influenza viruses (both Influenza A and Influenza B) are notorious for their seasonality and high infectious potentials. Throughout modern history, Influenza A viruses have cast several deadly pandemics, including the historic 1918 Spanish flu (H1N1), Asian flu (H2N2), Hong Kong flu (H3N2), and the more recent H1N1 outbreak in 2009, rendering life losses in the millions. An estimated 140,000 to 710,000 Americans are hospitalized each year because of complications from the flu illness.

To support the research in influenza vaccine development and diagnosis, Sino Biological has developed a large collection of antibodies against different antigens of Influenza. These antibodies can be used to detect and/or neutralize the virus in a variety of assays including ELISA, western blot, SPR (Biacore and Octet), pseudovirus infection, and potentially *in vivo* animal studies.

Influenza Antigens



Hemagglutinin (HA): This antigen is found on the surface of the influenza virus and is responsible for binding to host cells and initiating infection. There are 18 different subtypes of HA (H1-H18), and each subtype has a slightly different structure that can affect the severity of the illness caused by the virus.

Nucleoprotein (NP): This antigen is found inside the influenza virus and is responsible for packaging the viral RNA. It is less variable than HA and NA, but can still be used to track the spread of the virus.

Neuraminidase (NA): This antigen is also found on the surface of the influenza virus and is responsible for helping the virus to exit infected cells and spread to new ones. There are 11 different subtypes of NA (N1-N11), and like HA, the structure of each subtype can affect the severity of the illness caused by the virus.

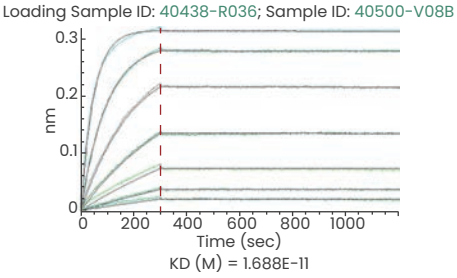
Nucleoprotein (NP) Antibodies

Influenza viral nucleoprotein (NP) is a structural protein that plays a critical role in virus replication and host adaptation. Antibodies targeting NP proteins are commonly used for immunodetection of influenza viruses in various assays, including ELISA, lateral flow assay (LFA), and direct fluorescent antibody tests. These assays can be used in both research and clinical diagnostics. Due to the high frequency of antigenic drift or shift among different influenza strains, broad-spectrum influenza antibodies are particularly desired for flu diagnostics.

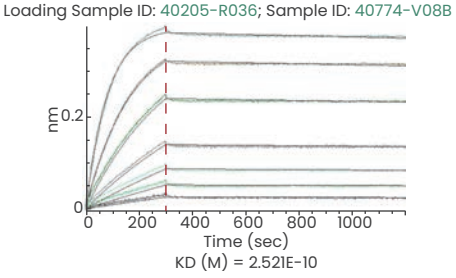
Sino Biological has developed 16 pan Influenza A or B nucleoprotein antibodies and validated them by ELISA and WB assays. Six Pan antibody pairs against the NP protein of Influenza A and Influenza B, have been identified, respectively. These matched pairs have been validated in the sandwich ELISA assay with high sensitivity (at pg level). They also demonstrate broad reactivity against a large cohort of flu strains.

High Binding Affinity

The binding affinity between immobilized Influenza B NP protein (Cat#: 40500-V08B) with the anti-NP antibody (Cat#: 40438-R036) in BLI assay.



The binding affinity between immobilized Influenza A NP protein (Cat#: 40774-V08B) with the anti-NP antibody (Cat#: 40205-R063) in BLI assay.

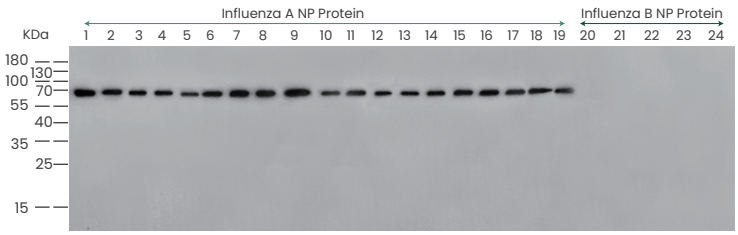


16 Pan Influenza A or B Nucleoprotein antibodies have been developed and validated by ELISA and WB assays.

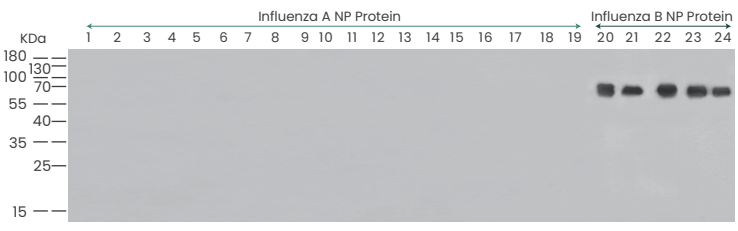
Pan Influenza A NP Antibodies				
40208-MM03	40208-R014	40208-MM04	40208-R010	40208-R061
40208-R113	40208-R117	40205-MM16	40205-MM18	40205-R063

Pan Influenza B NP Antibodies		
40438-MM05	40438-R016	40438-MM09
40438-R036	40438-R004	40438-MM10

Western Blot Analysis of Hemagglutinin Antibodies to 24 Influenza Antigens



Anti-Influenza A NP rabbit mAb (Cat#: 40208-R010) at 1:2000 dilution.



Anti-Influenza B NP rabbit mAb (Cat#: 40438-R036) at 1:2000 dilution.

Lane 1: 40204-V08B | H1N1 (A/Brevig Mission/1/1918)
Lane 2: 40776-V08B | H1N1 (A/Brisbane/02/2018)*
Lane 3: 40205-V08B | H1N1 (A/California/07/2009)
Lane 4: 40723-V08B | H1N1 (A/Guangdong-Maonan/SWL1536/2019)*
Lane 5: 40724-V08B | H1N1 (A/Hawaii/70/2019)*
Lane 6: 40777-V08B | H1N1 (A/Michigan/45/2015)*
Lane 7: 11675-V08B | H1N1 (A/Puerto Rico/8/34/Mount Sinai)
Lane 8: 40774-V08B | H1N1 (A/Victoria/2570/2019A/Wisconsin/588/2019)
Lane 9: 40033-V08B | H2N2 (A/Ann Arbor/6/1960)
Lane 10: 40207-V08B | H3N2 (A/Aichi/2/1968)
Lane 11: 40778-V08B | H3N2 (A/Cambodia/e0826360/2020 (H3N2)-like)
Lane 12: 40208-V08B | H3N2 (A/Hong Kong/1/1968)
Lane 13: 40753-V08B | H3N2 (A/Hong Kong/2671/2019)*
Lane 14: 40754-V08B | H3N2 (A/Hong Kong/45/2019)*
Lane 15: 40781-V08B | H3N2 (A/Hong Kong/4801/2014)*
Lane 16: 40779-V08B | H3N2 (A/Kansas/14/2017)*
Lane 17: 40499-V08B | H3N2 (A/Switzerland/9715293/2013)*
Lane 18: 40110-V08B | H7N9 (A/Anhui/1-BALF_RG6/2013)
Lane 19: 40111-V08B | H7N9 (A/Shanghai/2/2013)
Lane 20: 40783-V08B | Influenza B (B/Brisbane/60/2008)*
Lane 21: 40782-V08B | Influenza B (B/Colorado/06/2017)*
Lane 22: 40438-V08B | Influenza B (B/Florida/4/2006)
Lane 23: 40500-V08B | Influenza B (B/Phuket/3073/2013)*
Lane 24: 40755-V08B | Influenza B (B/Washington/02/2019)*
*: Antigen from 2015-2022 Influenza Vaccine Strain

Antibody Pairs Against NP for the Detection of Pan Influenza A & B

Sino Biological has identified six Pan antibody pairs against the NP protein of Influenza A and Influenza B, respectively. These matched pairs have been validated in the sandwich ELISA assay with high sensitivity (at pg level). They also demonstrate broad reactivity against a large cohort of flu strains.

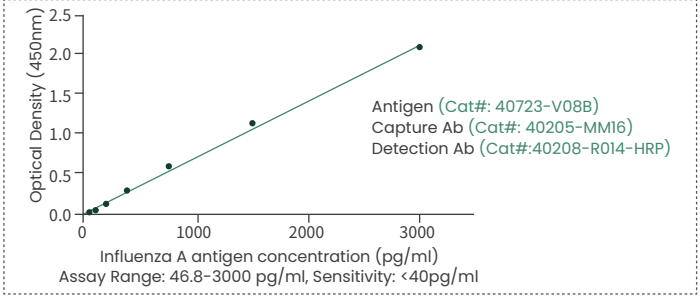
Antibody Pairs for Pan Influenza A NP Detection

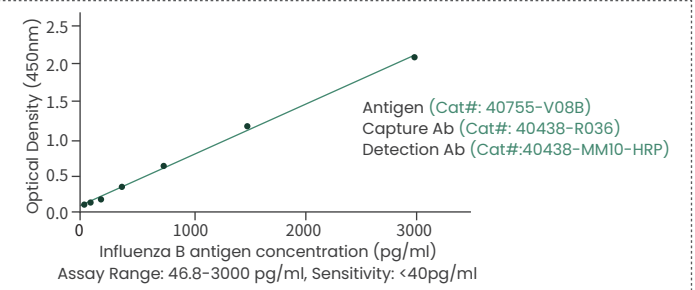
Pair No.	Capture Ab	Detection Ab
PanA-1	40205-MM16	40208-R014
PanA-2	40205-R063	40205-MM18
PanA-3	40208-R117	40205-MM18

Antibody Pairs for Pan Influenza B NP Detection

Pair No.	Capture Ab	Detection Ab
PanB-1	40438-R004	40438-MM10
PanB-2	40438-R036	40438-MM10
PanB-3	40438-MM05	40438-R036

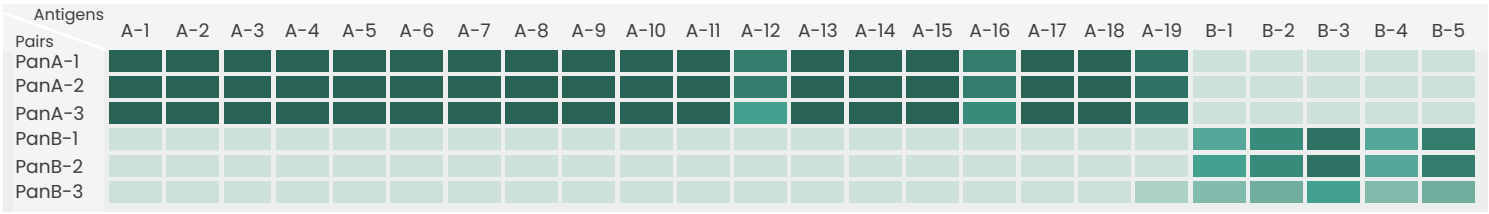
High Sensitivity (pg level)





Broad Spectrum and High Specificity

These antibody pairs can detect a broad spectrum of strains within the target subtype without any cross-reactivity with the other subtypes. A total of 24 influenza A and B antigens were tested by ELISA assay.



Binding Capacity: Strong Weak

The Aforementioned Antigens:

B-1: 40783-V08B (Influenza B, B/Brisbane/60/2008)
B-2: 40782-V08B (Influenza B, B/Colorado/06/2017)
B-3: 40438-V08B (Influenza B, B/Florida/4/2006)
B-4: 40500-V08B (Influenza B, B/Phuket/3073/2013)
B-5: 40755-V08B (Influenza B, B/Washington/02/2019)
A-1: 40204-V08B (H1N1, A/Brevig Mission/1/1918)
A-2: 40776-V08B (H1N1, A/Brisbane/02/2018)
A-3: 40205-V08B (H1N1, A/California/07/2009)
A-4: 40723-V08B (H1N1, A/Guangdong-Maonan/SWL1536/2019)
A-5: 40724-V08B (H1N1, A/Hawaii/70/2019)
A-6: 40777-V08B (H1N1, A/Michigan/45/2015)
A-7: 11675-V08B (H1N1, A/Puerto Rico/8/34/Mount Sinai)
A-8: 40774-V08B (H1N1, A/Victoria/2570/2019 | A/Wisconsin/588/2019)
A-9: 40033-V08B (H2N2, A/Ann Arbor/6/1960)
A-10: 40207-V08B (H3N2, A/Aichi/2/1968)
A-11: 40778-V08B (H3N2, A/Cambodia/e0826360/2020 (H3N2)-like)
A-12: 40208-V08B (H3N2, A/Hong Kong/1/1968)
A-13: 40753-V08B (H3N2, A/Hong Kong/2671/2019)
A-14: 40754-V08B (H3N2, A/Hong Kong/45/2019)
A-15: 40781-V08B (H3N2, A/Hong Kong/4801/2014)
A-16: 40779-V08B (H3N2, A/Kansas/14/2017)
A-17: 40499-V08B (H3N2, A/Switzerland/9715293/2013)
A-18: 40110-V08B (H7N9, A/Anhui/1-BALF_RG6/2013)
A-19: 40111-V08B (H7N9, A/Shanghai/2/2013)

Selected References for NP Antibodies:

Niu J, et al., Microbiota-derived acetate enhances host antiviral response via NLRP3. Nat Commun. 2023 Feb 6;14(1):642. doi: 10.1038/s41467-023-36323-4. PMID: 36746963; PMCID: PMC9901394.

Kwon SJ, et al., Nanostructured glycan architecture is important in the inhibition of influenza A virus infection. Nat Nanotechnol. 2017 Jan;12(1):48-54. doi: 10.1038/nnano.2016.181. Epub 2016 Oct 24. PMID: 27775724.

Wei Y, et al., The Nucleoprotein of H7N9 Influenza Virus Positively Regulates TRAF3-Mediated Innate Signaling and Attenuates Viral Virulence in Mice. J Virol. 2020 Nov 23;94(24):e01640-20. doi: 10.1128/JVI.01640-20. PMID: 33028715; PMCID: PMC7925206.

Antibodies for HA

With the world's largest viral antigen collection, ProVir®, Sino Biological provides a range of recombinant influenza antigen products, including Hemagglutinin (HA), Neuraminidase (NA), and Nucleoprotein (NP) proteins from all WHO-recommended vaccine strains in recent years (2015-2024). Because of the distinct role of HA, it is widely used for research on antibodies against influenza. A large collection of monoclonal antibodies against the HA antigens are available to support the research on influenza.

Pan Influenza A and B HA Antibody

Because of the distinct role of HA, it is widely used for research on antibodies against influenza. WB and ELISA assays are used to confirm the recognition of HA antigens. Results show that rabbit MAb 86001-RM01 and 11053-R004 are broad-spectrum antibodies for Influenza A and B, respectively.

Pan Hemagglutinin Antibodies

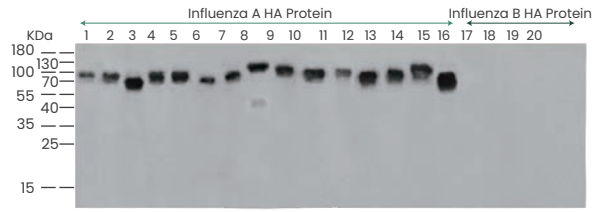
The ELISA and WB assays show that two antibody clones Cat#: 86001-RM01 and Cat#: 11053-R004 can specifically bind to HA of Influenza A and Influenza B, respectively.

Number	Antigens	ELISA Assay	WB Assay	ELISA Assay	WB Assay	Antigen Subtype	Antigen Strain	Vaccine Strain
		86001-RM01		11053-R004				
1	40719-V08H	+++	+++	-	-	H1N1	A/Brisbane/02/2018	2019-2020
2	11055-V08H	+++	+++	-	-		A/California/04/2009	-
3	11085-V08B	+++	+++	-	-		A/California/07/2009	2016-2017, 2015-2016
4	40717-V08H	+++	+++	-	-		A/Guangdong-Maonan/SWL1536/2019	2020-2021
5	40567-V08H1	+++	+++	-	-		A/Michigan/45/2015	2018-2019, 2017-2018
6	11684-V08H	+++	+++	-	-		A/Puerto Rico/8/1934	-
7	40787-V08H	+++	+++	-	-		(A/Wisconsin/588/2019) / (A/Victoria/2570/2019)	2022-2023, 2021-2022
8	11056-V08H	+++	+++	-	-	H3N2	A/Brisbane/10/2007	-
9	40789-V08H	+++	+++	-	-		A/Cambodia/e0826360/2020	2021-2022
10	40721-V08H	+++	+++	+	-		A/Hong Kong/2671/2019	2020-2021
11	40765-V08H	+++	+++	-	-		A/Hong Kong/45/2019	2020-2021
12	40555-V08B	+++	+++	-	-		A/Hong Kong/4801/2014	2017-2018, 2016-2017
13	40720-V08H	+++	+++	-	-		A/Kansas/14/2017	2019-2020
14	40580-V08H	+++	+++	-	-		A/Singapore/INFIMH-16-0019/2016	2018-2019
15	40497-V08B	+++	+++	-	-		A/Switzerland/9715293/2013	2015-2016
16	40016-V08B	-	-	+++	+++	Influenza B	B/Brisbane/60/2008	2017-2018, 2016-2017, 2015-2016
17	40581-V08H	-	-	+++	+++		B/Colorado/06/2017	2019-2020, 2018-2019
18	11053-V08H	-	-	+++	+++		B/Florida/4/2006	-
19	40498-V08B	-	-	+++	+++		B/PHUKET/3073/2013	2022-2023, 2021-2022, 2020-2021, 2019-2020, 2018-2019, 2017-2018, 2016-2017, 2015-2016
20	40722-V08H	-	-	+++	+++		B/Washington/02/2019	2021-2022, 2020-2021

-: No Effect; +: Medium/Minimal Effect; +++: Strong Effect

○ Western Blot Analysis of Hemagglutinin Antibodies to aforementioned 20 Influenza Antigens

Antigens for each lane, please refer to above form.



Anti-Influenza A HA rabbit mAb (Cat#: 86001-RM01) at 1:5000 dilution.

Anti-Influenza B HA rabbit mAb (Cat#: 11053-R004) at 1:10000 dilution.

Broad Collection of HA Antibodies for Various Influenza Strains

Neutralizing Antibodies

H1N1	Anti-HA, Mouse MAb 11055-MM11 Mouse IgG1		H5N1	Anti-HA, Mouse MAb 11048-MM01 Mouse IgG1	Anti-HA 68031-H011 Human IgG1
H7N7	Anti-HA, Rabbit MAb 11082-R019 Rabbit IgG		H10N8	Anti-HA, Mouse MAb 40359-M001 Mouse IgG1	Anti-HA, chimeric MAb 40359-mh001 Human/mouse chimeric IgG

Featured HA Antibodies

Cat#	Target	Antibody Type	Application	Antigen Subtype	Antigen Strain	Citation #
11052-MM06	HA	Mouse MAb	WB, ELISA	H1N1	A/Brisbane/59/2007	5
11055-RM10	HA	Rabbit MAb	WB		A/California/04/2009	15
11085-MM01	HA	Mouse MAb	ELISA		A/California/07/2009	8
11684-MM03	HA	Mouse MAb	WB, ELISA, ELISA (Det)		A/Puerto Rico/8/1934	16
11056-MM01	HA	Mouse MAb	ELISA (Det)	H3N2	A/Brisbane/10/2007	10
11056-R006	HA	Rabbit MAb	ELISA		A/Brisbane/10/2007	5
11048-MM14	HA	Mouse MAb	ELISA (Cap)	H5N1	A/Anhui/1/2005	1
40158-MM08	HA	Mouse MAb	ELISA		A/chicken/VietNam/NCVD-016/2008	1
40398-MM08	HA	Mouse MAb	ELISA	H6N2	A/chicken/Guangdong/C273/2011	2
40103-MM06	HA	Mouse MAb	ELISA	H7N9	A/Anhui/1/2013	5
11053-MM06	HA	Mouse MAb	WB	Influenza B	B/Florida/4/2006	11
11053-R004	HA	Rabbit MAb	WB, ELISA	Influenza B	B/Florida/4/2006	14

ELISA Kits and Antibody Pair Sets for HA

Sino Biological offers several antibody pair sets for the quantitative measurement of HA by ELISA.

○ Key feature

High sensitivity: pg level • Both capture and detection antibodies are monoclonal Abs • Competitive price

Catalog	Description	Assay Range	Sample Type	Sensitivity
KIT40104	Influenza H7N9 Hemagglutinin / HA ELISA Kit	15.6-1000 pg/mL	Recombinant protein	3 pg/mL
85 /100 1 Citation				
KIT11714	Influenza A H4N6 (A/mallard/Ohio/657/2002) Hemagglutinin / HA ELISA Kit	62.5-4000 pg/mL	Recombinant protein	16 pg/mL
KIT11055	Influenza H1N1 Hemagglutinin / HA ELISA Kit	31.25-2000 pg/mL	Recombinant protein	14.71 pg/mL
93 /100 6 Citations				
KIT11056	Influenza H3N2 Hemagglutinin / HA ELISA Kit	781.25-50000 pg/mL	Recombinant protein	263.49 pg/mL
KIT11684	Influenza A H1N1 (A/Puerto Rico/8/1934) Hemagglutinin / HA ELISA Kit	62.5-4000 pg/mL	Recombinant protein	18.5 pg/mL
KIT40103	Influenza H7N9 (A/Anhui/1/2013) Hemagglutinin / HA ELISA Kit	15.6-1000 pg/mL	Recombinant protein	4.9 pg/mL
85 /100 1 Citation				
KIT11229	Influenza A H9N2 (A/Hong Kong/1073/99) Hemagglutinin / HA ELISA Kit	78.13-5000 pg/mL	Recombinant protein	6.9 pg/mL
KIT11048	Influenza A H5N1 (A/Anhui/1/2005) Hemagglutinin / HA ELISA Kit	125-8000 pg/mL	Recombinant protein	89.7 pg/mL
92 /100 3 Citations				
KIT11053	Influenza B virus (B/Florida/4/2006) Hemagglutinin / HA ELISA Kit	109.38-7000 pg/mL	Recombinant protein	25.54 pg/mL

Antibodies for Neuraminidase (NA)

Influenza neuraminidase is located on the surface of influenza viruses and enables the virus to be released from host cells. Neuraminidases are enzymes that cleave sialic acid groups from glycoproteins and are required for influenza virus replication. There are nine subtypes of influenza A NA, which are divided into two phylogenic groups. The first group consists of the neuraminidases of N1, N4, N5 and N8 subtypes, and the second one consists of N2, N3, N6, N7 and N9 subtypes. These are expressed in numerous combinations of viruses isolated from aquatic and avian species, and two additional combinations, H17N10 and H18N11, have been identified in bats. Sino Biological offers a variety of antibodies to support the research in NA.

Antibodies for NA Detection

Cat#	Antibody Type	Application	Antigen
11058-MM07	Mouse MAb	WB, ELISA	A/California/04/2009 (H1N1)
11058-R001	Rabbit MAb	WB, ELISA	A/California/04/2009 (H1N1)
40017-RP01	Rabbit PAb	ELISA	A/Babol/36/2005 (H3N2)
40017-T62	Rabbit PAb	WB, ELISA	A/Babol/36/2005 (H3N2)
40235-RP01	Rabbit PAb	ELISA	A/mallard/Ohio/657/2002 (H4N6)
40235-T62	Rabbit PAb	WB, ELISA	A/mallard/Ohio/657/2002 (H4N6)
40018-RP01	Rabbit PAb	ELISA	A/Hubei/2011 (H5N1)
40018-T30	Rabbit PAb	ELISA	A/Hubei/1/2010 (H5N1)
40018-T62	Rabbit PAb	WB, ELISA	A/Hubei/1/2010 (H5N1)
40202-RP01	Rabbit PAb	ELISA	A/Netherlands/219/2003 (H7N7)
40202-T62	Rabbit PAb	WB, ELISA	A/Netherlands/219/2003 (H7N7)
40040-MM02	Mouse MAb	ELISA	A/Hong Kong/1073/99 (H9N2)
40040-RP01	Rabbit PAb	ELISA	A/Hong Kong/1073/99 (H9N2)
40040-T62	Rabbit PAb	WB, ELISA	A/Hong Kong/1073/99 (H9N2)

Antibodies for Other Influenza Antigens:

Anti-Matrix Protein 1 (M1 Antibody)

Cat#	Antibody Type	Application	Antigen Subtype	Antigen Strain
40010-RP01	Rabbit PAb	ELISA	H1N1	Influenza A H1N1 (A/Puerto Rico/8/34/Mount Sinai)
40010-R111	Rabbit MAb	ELISA	H1N1	Influenza A H1N1 (A/Puerto Rico/8/34/Mount Sinai)
40010-MM02	Mouse MAb	ELISA	H1N1	Influenza A H1N1 (A/Puerto Rico/8/34/Mount Sinai)
40010-T62	Rabbit PAb	WB, ELISA	H1N1	Influenza A H1N1 (A/Puerto Rico/8/34/Mount Sinai)

Selected References for Influenza Antibodies:

HA Antibodies

Gromadzka, B., et. al., Characterization of Immune Response towards Generation of Universal Anti-HA-Stalk Antibodies after Immunization of Broiler Hens with Triple H5N1/NA-HA-M1 VLPs. Viruses. 2022 Mar 30;14(4):730. doi: 10.3390/v14040730. PMID: 35458460;

Liu, Z., et al. A novel STING agonist-adjuvanted pan-sarbecovirus vaccine elicits potent and durable neutralizing antibody and T cell responses in mice, rabbits and NHPs. Cell Res 32, 269–287 (2022).
https://doi.org/10.1038/s41422-022-00612-2

NA

Wu, C., et al., Influenza A surface glycosylation and vaccine design. Proceedings of the National Academy of Sciences of the United States of America, 114(2), 280–285. https://doi.org/10.1073/pnas.1617174114

M1

Matsuda, T., et al., Production of influenza virus-like particles using recombinant insect cells. Biochem Eng J. 2020 Nov 15;163:107757. doi: 10.1016/j.bej.2020.107757. Epub 2020 Aug 14. PMID: 32834743

Influenza Virus Research Reagent Bank

Sino Biological have developed an influenza antigen collection features 630+ HA, NA, and ME antigens from over 300 strains of influenza viruses, including vaccine strains and the pandemic strains such as the 2009 swine flu (A/California/04/2009 (H1N1)). Sino Biological also carries antigen microarrays for influenza-related serology studies.

ISO 13485:2016

World's Largest Influenza Virus Research Reagent Center:

10 Antigens
HA (HA0, HA1, HA2, HA), NA, NP,
M1, M2, NS1, NS2, PB1, PB2, PA

60 Subtypes
H1-H18, N1-N11,
Influenza B

330 Strains
Vaccine Strains
HPAI Strains
Newly Identified Strains

630+ Proteins
High Activity
Covering Most of Hot Research Strains

200+ Antibodies
Neutralizing Antibodies
Pan Antibodies (Broad Spectrum)

1,500+ Genes, ELISA Kits
All Produced In-house

Various Applications

- Virus Diagnostic Research
- Vaccine, Anti-virus Drug, Anti-virus antibody Development
- Basic research

Strong R&D and Manufacture Capability

- All are produced in house
- Rapid development of HA protein in 12 days
- Rapid preclinical development of neutralizing antibody in 6 months

Recombinant HA, NA, and NP for 2023-2024 Influenza Vaccine Strains Available for Order

Year 2023-2024

A/Victoria/4897/2022 (H1N1)
Recommended for Egg-based (quadrivalent,trivalent) Vaccine
HA: 40938-V08H (pre-order), 40938-V08B (pre-order)
NA: 40939-V08B (pre-order)

A/Darwin/9/2021 (H3N2)
Recommended for Egg-based, Cell- or recombinant-based (quadrivalent, trivalent) Vaccine
HA: 40859-V08B, 40859-V08H
NA: 40860-V08B
NP: 40858-V08B

B/Austria/1359417/2021 (B/Victoria lineage)
Recommended for Egg-based, Cell- or recombinant-based (quadrivalent, trivalent) Vaccine
HA: 40862-V08B, 40862-V08H
NA: 40863-V08B
NP: 40861-V08B

A/Wisconsin/67/2022 (H1N1)
Recommended for Cell- or recombinant-based (quadrivalent, trivalent) Vaccine
HA: 40940-V08H (pre-order), 40940-V08B (pre-order)
NA: 40941-V08B (pre-order)
NP: 40942-V08B (pre-order)

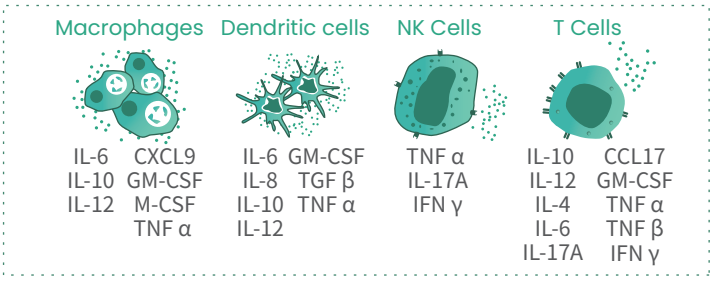
B/Phuket/3073/2013 (B/Yamagata lineage)
Recommended for Egg-based, Cell- or recombinant-based (quadrivalent) Vaccine
HA: 40498-VNAB, 40498-V08B, 40498-V08H1
NA: 40502-V07B
NP: 40500-V08B

ELISA Kits for Cytokines

Measurement of cytokines such as TNF-α, IL-6, HGF and other cytokines provides insight into the specific immune responses generated by the vaccine during the development and evaluation of influenza vaccines. Antibodies are used to detect and measure specific cytokines. Sino biological offers a variety of validated antibodies developed against cytokines.

High-quality ELISA Kits for the Detection of Cytokines

Based on the well-established recombinant protein platform, antibody technology platform, and QC platform, Sino Biological Inc. has developed a variety of ELISA Kits for the quantitative detection of cytokines, which can be used to accurately quantify cytokines in plasma, serum, cell culture supernatant, and other biological samples, helping researchers to reveal the physiological mechanism of disease and explore the treatments.



8 International QC Test Indicators for High-quality ELISA Kits

Detection limit	Precision	Recovery	Linearity	Stability	Natural sample test	Cross-reactivity	Interference
Evaluate the sensitivity	Evaluate the repeated experimental errors	Evaluate the accuracy	Evaluate the accuracy	Evaluate the validity period	Natural samples	Evaluate the Specificity	Analyze the interference to results

Facts are More Eloquent Than Words: IL-4 ELISA Kit Comparison Among Different Brands

IL-4 target	ELISA Kit from Sino Biological Inc.	A high-end brand	A middle-end brand	A low-end brand
Standard curve	10.9-700 pg/mL	31.2-2,000 pg/mL	10.24-400 pg/mL	3.12-200 ng/mL
The limit of detection	2.5 pg/mL	10 pg/mL	2 pg/mL	0.78 ng/mL
Precision	CV < 15%	CV < 15%	CV < 15%	--
Recovery	80-120%	80-120%	80-120%	--
Linearity test	80-120%	80-120%	80-120%	--
Natural sample test	cell culture supernatant	cell culture supernatant	--	--
Cross reactivity	37 targets tested	32 targets tested	7 targets tested	--
Interference test	37 targets tested	32 targets tested	7 targets tested	--
Price	$ $	$ $ $ $	$ $ $	$ $

CV: coefficient of variation

ELISA Kits—Ready to Use

Species	Target	Cat#	Linear range (pg/mL)	Sample
Mouse	IL1A	KIT50114	6.56-420	S, C
Human	IL2	KIT11848	18.75-1200	S, C, P
Human	IL4	KIT11846	10.94-700	C
Human	IL5	KIT15673	4.69-300	C
Human	IL6	KIT10395A	5.47-350	S, C
Human	IL8	KIT10098	2.5-160	C
Human	IL10	KIT10947A	18.75-1200	C
Human	IL17A	KIT12047	1.88-120	C
Mouse	IL17A	KIT51065	23.44-1500	C
Human	IL18	KIT10119	46.88-3000	S
Mouse	IL18	KIT50073	46.88-3000	S
Human	TNFα	KIT10602	31.25-2000	C
Human	IFNγ	KIT11725A	23.44-1500	C
Human	CCL2	KIT10134	3.44-220	S, U
Mouse	CCL2	KIT50368	13.28-850	C
Human	CCL17	KIT10233	18.75-1200	S
Human	GM-CSF	KIT10015	7.81-500	C
Mouse	GM-CSF	KIT51048	1.88-120	S, C
Human	M-CSF	KIT11792	11.72-750	S, C, U
Human	NGF	KIT11050	3.13-200	C

Notes: S (Serum); C (Cell culture supernatant); P (Plasma); U (Urine)

ELISA Pair Sets—Cost-effective

Species	Target	Cat#	Linear range (pg/mL)
Mouse	IL1A	SEK50114	6.25-400
Human	IL5	SEKA15673	3.91-250
Human	IL6	SEKB10395	9.38-600
Human	IL8	SEK10098	11.72-750
Human	IL10	SEKA10947	14.06-900
Human	IL17A	SEK12047	1.17-75
Mouse	IL17A	SEK51065	15.62-1000
Human	IL18	SEK10119	31.25-2000
Mouse	IL18	SEK50073	31.25-2000
Human	IL33	SEK10368	1.56-100
Human	TNFα	SEKA10602	39.06-2500
Mouse	TNFα	SEK50349	31.25-2000
Ferret	TNFα	SEK60002	78.13-5000
Human	IFNγ	SEKA11725	21.88-1400
Human	CCL2	SEK10134	3.91-250
Mouse	CCL2	SEK50368	7-450
Human	CCL17	SEK10233	15.625-1000
Human	G-CSF	SEK10007	93.75-6000
Human	GM-CSF	SEK10015	6.25-400
Mouse	GM-CSF	SEK51048	1.88-120
Human	M-CSF	SEK11792	23.44-1500
Human	NGF	SEK11050	1.56-100

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