# Monoclonal Anti-HA-H1N1(Influenza A/Sydney/5/2021) Antibody, Human IgG1 (1C10)

Catalog # HA1-M757



#### Source

Monoclonal Anti-HA-H1N1(Influenza A/Sydney/5/2021) Antibody, Human IgG1 (1C10) is a chimeric monoclonal antibody recombinantly expressed from HEK293, which combines the variable region of a mouse monoclonal antibody with Human constant domain.

Clone	Formulation
1C10	Lyophilized from 0.22 $\mu$ m filtered solution in PBS, pH7.4 with trehalose as
Isotype	protectant.
Human IgG1   Human Kappa	Contact us for customized product form or formulation.
Conjugate	Reconstitution
	Please see Certificate of Analysis for specific instructions.
Unconjugated	For best performance, we strongly recommend you to follow the reconstitution
Antibody Type	protocol provided in the CoA.
Recombinant Monoclonal	Storage
Reactivity	For long term storage, the product should be stored at lyophilized state at -20°C
Virus	or lower.
Specificity	Please avoid repeated freeze-thaw cycles.
	This product is stable after storage at:
This product is a specific antibody specifically reacts with HA.	• -20°C to -70°C for 12 months in lyophilized state;
Application	• -70°C for 3 months under sterile conditions after reconstitution.

Purity

**Purification** 

>95% as determined by SDS-PAGE.

Protein A purified/ Protein G purified

Application	Recommended Usage
Western Blot	1-10 ug/mL

ELISA 1.6-12.5 ng/mL

## **Cross Verification**

This product can cross in Elisa with Influenza A [Victoria/4897/2022] Hemagglutinin (HA) Protein, His Tag (Cat. No. HA1-V52H8). Influenza A [Wisconsin/67/2022] Hemagglutinin (HA) Protein, His Tag (Cat. No. HA1-V52H7). Influenza A (A/Georgia/12/2022) Hemagglutinin (HA) Protein, His Tag (Cat. No. HAE-V52H7). This product No cross-reactivity in ELISA with Influenza A [A/Victoria/2570/2019] Hemagglutinin (HA) Protein, His Tag (Cat. No. HA1-V52H6). Influenza A [A/Darwin/6/2021 (H3N2)] HA Protein, His Tag (Cat. No. HA2-V52H5). Influenza A [A/Darwin/6/2021 (H3N2)] HA Protein, His Tag (Cat. No. HA2-V52H5).

Influenza A [A/Darwin/6/2021 (H3N2)] HA Protein, His Tag (Cat. No. HA2-V52H5). Influenza A (Vietnam/1194/2004(H5N1)) Hemagglutinin (HA) Protein, His Tag (Cat. No. HA1-V52H9). Influenza A (Guangdong/18SF020(H5N6)) Hemagglutinin (HA) Protein, His Tag (Cat. No.HA6-V52H3). Influenza A (turkey/Germany-MV/R2472/2014(H5N8)) HA Protein, His Tag (Cat. No. HA8-V52H3). Influenza A (A/Shanghai/02/2013(H7N9)) Hemagglutinin (HA) Protein, His Tag (Cat. No. HA9-V52H3). Influenza A [A/guinea fowl/Hong Kong/WF10/99(H9N2)] Hemagglutinin (HA) Protein, His Tag (Cat. No. HA2-V52H7). Influenza B [Austria/1359417/2021 (B/Victoria lineage)] Hemagglutinin (HA) Protein, His Tag (Cat. No. HAE-V52H3).



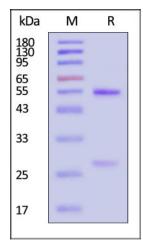
# Monoclonal Anti-HA-H1N1(Influenza A/Sydney/5/2021) Antibody, Human IgG1 (1C10)



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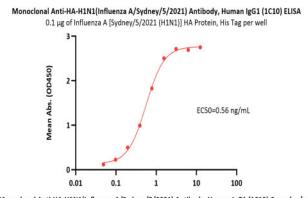
Influenza B [Phuket/3073/2013 (B/Yamagata lineage)] HA Protein, His Tag (Cat. No. HAE-V52H4).
Influenza A [A/Bangkok/1/1979 (H3N2)] HA, His Tag (Cat. No. HA2-V52H3).
Influenza A [A/Wisconsin/588/2019 (H1N1)] HA, His Tag (Cat. No. HA1-V52H3).
Influenza A Virus HA (H3N2) Protein, His Tag (Cat. No. H32-V52H3).
Influenza B (B/Singapore/INFTT-16-0610/2016) Hemagglutinin (HA) Protein, His Tag (Cat. No. HAE-V52H5).
Influenza B (B/Singapore/WUH4618/2021) Hemagglutinin (HA) Protein, His Tag (Cat. No. HAE-V52H6).
Influenza A (A/Sydney/1304/2022) Hemagglutinin (HA) Protein, His Tag (Cat. No. HA2-V52H9).

### **SDS-PAGE**



Monoclonal Anti-HA-H1N1(Influenza A/Sydney/5/2021) Antibody, Human IgG1 (1C10) on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With <u>Star</u> <u>Ribbon Pre-stained Protein Marker</u>).

## **Bioactivity-ELISA**





Immobilized Influenza A [Sydney/5/2021 (H1N1)] HA Protein, His Tag (Cat. No. HA1-V52H4) at 1  $\mu$ g/mL (100  $\mu$ L/well) can bind Monoclonal Anti-HA-H1N1(Influenza A/Sydney/5/2021) Antibody, Human IgG1 (1C10) (Cat. No. HA1-M757) with a linear range of 0.05-2 ng/mL (QC tested).

# **Bioactivity-SPR**

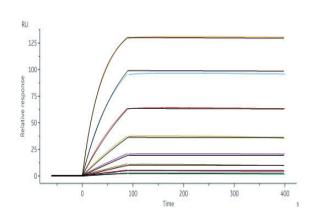


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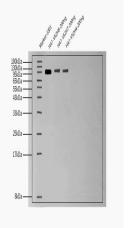


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Monoclonal Anti-HA-H1N1 (Influenza A/Sydney/5/2021) Antibody, Human IgG1 (1C10) (Cat. No. HA1-M757) captured on Protein A Chip can bind Influenza A [Sydney/5/2021 (H1N1)] HA Protein, His Tag (Cat. No. HA1-V52H4) with an affinity constant of 0.334 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

### Western Blot



Detection of Anti-HA-H1N1(Influenza ASydney52021)-1C10,Human,Human IgG1 Human Kappa by Western Blot. Anti-HA-H1N1(Influenza ASydney52021)-1C10,Human,Human IgG1 Human Kappa at 1/1000 dilution + Influenza A [Victoria/4897/2022] Hemagglutinin (HA) Protein, His Tag (MALS verified) at 200ng & Influenza A [Wisconsin/67/2022] Hemagglutinin (HA) Protein, His Tag (MALS verified) at 200ng & Influenza A [Sydney/5/2021 (H1N1)] Hemagglutinin (HA) Protein, His Tag (MALS verified) at 200ng. Secondary: (HFC)-HRP Goat Anti-Human IgG,Fcγ fragment specific (min X Bov,Hrs,Ms Sr Prot) at 1/2000 dilution.

Predicted band size: 95 kDa&100 kDa&100 kDa 12% Bis-Tris Protein Gel.

#### Background

Hendra virus (HeV) and Nipah virus (NiV) are henipaviruses discovered in the mid-to late 1990s that possess a broad host tropism and are known to cause severe and often fatal disease in both humans and animals. HeV and NiV infect host cells through the coordinated efforts of two envelope glycoproteins. The G glycoprotein attaches to cell receptors, triggering the fusion (F) glycoprotein to execute membrane fusion. G is a type II homotetrameric transmembrane protein responsible for binding to ephrinB2 or ephrinB3 (ephrinB2/B3) receptors. F is a homotrimeric type I transmembrane protein that is synthesized as a premature F0 precursor and cleaved by cathepsin L during endocytic recycling to yield the mature, disulfide-linked, F1 and F2 subunits. Upon binding to ephrinB2/B3, NiV G undergoes conformational changes leading to F triggering and insertion of the F hydrophobic fusion peptide into the target membrane. Subsequent refolding into the more stable post-fusion F conformation drives merger of the viral and host membranes to form a pore for genome delivery to the cell cytoplasm.

## **Clinical and Translational Updates**



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