

# Mouse Monoclonal Antibody to Influenza A Virus H1N1 ( Swine Flu 2009 ) HA



Sino Biological  
Biological Solution Specialist

Catalog Number: 11055-MM11

General Information	
<b>Immunogen:</b>	Recombinant H1N1 HA protein
<b>Clone ID:</b>	8F3G7
<b>Ig Type:</b>	Mouse IgG1
<b>Applications:</b>	ELISA,B/N
	IHC, FCM, IF, IP et al. applications haven't been validated. (Antibody's applications haven't been validated with corresponding virus positive samples. Optimal concentrations/dilutions should be determined by the end user.)
<b>Specificity:</b>	H1N1 ( A/California/04/2009 ) HA
<b>Formulation:</b>	0.2 µm filtered solution in PBS
<b>Storage:</b>	< -20° C

## Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, human cell-derived, recombinant Influenza A virus H1N1 Hemagglutinin extracellular domain. The IgG fraction of the cell culture supernatant was purified by Protein A affinity chromatography.

## Applications

**Neutralization** – This antibody has neutralizing activity against **H1N1 (A/California/04/2009)** and **H1N1 (A/California/07/2009)**. No Cross-Neutralizing activity against H5N1 influenza virus.

**ELISA** – This antibody can be used at 0.5 - 1 µg/mL with the appropriate secondary reagents to detect H1N1 HA. The detection limit for H1N1 HA is 5 ng/well.

## Specificity

H1N1 (A/California/07/2009) HA

H1N1 (A/California/04/2009) HA

**Has cross-reactivity** in ELISA with

H1N1 (A/California/07/2009) HA

H3N2 (A/Brisbane/10/2007) HA

**No cross-reactivity** in ELISA with

H5N1 (A/Anhui/1/2005) HA

H5N1 (A/Indonesia/5/2005) HA

H5N1 (A/bar-headed goose/Qinghai/14/2008) HA

H1N1 (A/Brisbane/59/2007) HA

Influenza B (B/Florida/4/2006) HA

Human cell lysate ( 293 cell line )

H5N1 (A/turkey/Turkey/1/2005) HA

H5N1 (A/Viet nam/1194/2004) HA

[Our Online H1N1 \(Swine & Seasonal\), H5N1 Hemagglutinin \(HA\) Protein & Antibody](#)

## Storage

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. **Preservative-Free.**

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. **Avoid repeated freeze-thaw cycles.**

## Background

Influenza (flu) is a respiratory infection in mammals and birds. This virus is divided into three main types (A, B and C). Influenza A is found in a wide variety of bird and mammal species. Influenza B is largely confined to humans and is an important cause of morbidity. Influenza C infects humans, dogs and pigs, sometimes causing both severe illness and local epidemics. Influenza A is further divided into subtypes based on differences in the membrane proteins hemagglutinin (HA) and neuraminidase (NA). The notation HhNn is used to refer to the subtype comprising the hth discovered HA protein and the nth discovered NA protein. The HA is a trimer with a receptor binding pocket on the globular head of each monomer. Subtypes are further divided into strains. Each genetically distinct virus isolate is usually considered to be a separate strain.

The H1N1 viral strain ( A/California/04/2009 ) implicated in the 2009 flu pandemic among humans is often called "swine flu" because initial testing showed many of the genes in the virus were similar to influenza viruses normally occurring in North American swine. Two children in southern California were infected with H1N1 swine flu. The isolates are similar and have an unusual constellation of genes. The lack of contact between the two children, as well as a lack of contact with swine, suggests the virus is spreading human to human. The presence of swine H1N1 in humans raises concerns of recombination with H1N1 seasonal flu. Moreover, the 1918 pandemic strain was a recombinant between human H1N1 and swine H1N1. The likely ability of this swine H1N1 to transmit efficiently in humans is cause for concern. The HA, NA, and MP sequences of A/California/04/2009 have been placed on deposit at GISAID.

## Reference

1. Li KS, et al., 2004. Nature. 430: 209-13.
2. The Writing Committee of the WHO Consultation on Human Influenza A/H5, 2005, N Engl J Med 353 (13): 1374-85.
3. Taubenberger JK, et al., 2008. Annu Rev Pathol. 3: 499-522.
4. Christophe F, et al., 2009, Science. 324: 1557-1561.
5. Guan Y, et al., 2009, Revue scientifique et technique. 23(2): 453-65.
6. Morbidity and Mortality Weekly Report. 2009-04-24. p. 400-402.

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