PRODUCT INFORMATION

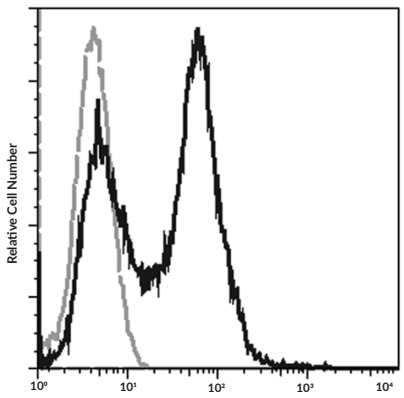
Influenza A H1N1 (Swine Flu 2009) HA Monoclonal Antibody (Clone 9G1G8)

Item No. 39541

Overview and Properties

Contents:	This vial contains 20 or 100 µl of protein A-affinity purified monoclonal antibody
Synonym:	Influenza A H1N1 (Swine Flu 2009) Hemagglutinin
Immunogen:	Recombinant influenza A H1N1 (Swine Flu 2009) HA
Cross Reactivity:	(+) H1N1 (A/California/04/2009) HA, H1N1 (A/California/07/2009) HA, H1N2 (A/swine/Guangxi/13/2006) HA, H1N3 (A/duck/NZL/160/1976) HA, H5N1 (A/Anhui/1/2005) HA, H5N1 (A/Vietnam/1194/2004) HA, H5N1 (A/Indonesia/5/2005) HA, H5N1 (A/turkey/Turkey/1/2005) HA, H5N1 (A/bar-headed goose/Qinghai/14/2008) HA; (-) H1N1 (A/Brisbane/59/2007) HA, H1N1 (A/BrevigMission/1/1918) HA, H1N1 (A/Solomon Islands/3/2006) HA, H1N1 (A/Ohio/UR06-0091/2007) HA, H1N1 (A/New Caledonia/20/1999) HA, H1N1 (A/Puerto Rico/8/1934) HA, H1N1 (A/WSN/1933) HA, H3N2 (A/Brisbane/10/2007) HA, Influenza B (B/Florida/4/2006) HA
Form:	Liquid
Storage:	4°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	9G1G8
Host:	Mouse
Isotype:	IgG2b
Applications:	ELISA and Western blot (WB); the recommended starting dilution for ELISA is 1:1,000-1:2,000 and 1:500-1:1,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Flow cytometric analysis of Influenza A H1N1 (Swine Flu 2009) HA Monoclonal Antibody (Clone 9G1G8). High Five™ cells were collected 48 hours post-infection by Bac-HA. 10^6 cells were stained with 1 µg of Influenza A H1N1 (Swine Flu 2009) HA Monoclonal Antibody for 20 minutes on ice. Cells were washed twice and incubated with 1 µg of a FITC goat anti-mouse Ig secondary antibody for 20 minutes on ice. Cells were washed twice and analyzed by flow cytometry.

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Description

Influenza A H1N1 HA is a type I membrane glycoprotein involved in receptor binding and virus-host cell fusion.[1,2] It is produced as a precursor protein, HA0, which is composed of a stalk and head domain and forms homotrimers on the viral surface.[1,3] The HA0 precursor is cleaved into subunits, HA1 and HA2, which are responsible for host cell surface receptor binding and endosomal membrane fusion, respectively, and this cleavage is required for endosomal fusion.[1] For influenza A and influenza B, which are low pathogenic influenza viruses, cleavage occurs *via* trypsin-like proteases, such as transmembrane serine protease 2 (TMRPSS2), which is essential for influenza A HA, but not influenza B HA, cleavage.[4-6] Cleaved influenza A H1N1 HA binds to terminal α2,6- or α2,3-sialic acids on glycoproteins or glycolipids on the host cell surface *via* the receptor-binding domain in the HA1 subunit, which triggers endocytosis of the virus and trafficking of the vesicle into the endosome.[3,7,8] The low pH environment of the endosome triggers viral rearrangement into a prefusion conformation, and the HA2 subunit facilitates fusion with the endosomal membrane to release viral ribonucleoproteins into the cytosol where they are relocated to the nucleus for viral replication.[3] Cayman's Influenza A H1N1 (Swine Flu 2009) HA Monoclonal Antibody (Clone 9G1G8) can be used for ELISA and Western blot (WB) applications.

References

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