

Monoclonal Anti-Influenza Virus H1 Hemagglutinin (HA), A/California/04/2009 (H1N1)pdm09, Clone S-OIV-3B2 (produced *in vitro*)

Catalog No. NR-19864

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Contributor:

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Manufacturer:

BEI Resources

Product Description:

Antibody Class: IgG2a λ

Mouse monoclonal antibody prepared against the H1 hemagglutinin (HA) protein of the A/California/04/2009 (H1N1)pdm09 strain of influenza virus was purified from clone S-OIV-3B2 hybridoma supernatant by protein G affinity chromatography. The B cell hybridoma was generated by the fusion of Sp2/0 mouse myeloma cells with splenocytes from BALB/c mice immunized by intraperitoneal injection with influenza virus A/California/04/2009 (H1N1)pdm09.¹

Please note that influenza virus A/swine/Iowa/15/1930 was not used as an immunogen in the generation of the hybridoma that produces NR-19864. The inclusion of A/swine/Iowa/15/1930 in the item name on the product label serves only to indicate that this antibody is cross-reactive on HA from classical swine H1N1 influenza viruses. See the Functional Activity section of this product information sheet for details.

HA is an antigenic glycoprotein found on the envelope of the influenza A virus. This protein binds to cellular receptors on the target cell and allows the influenza A virus to enter via endocytosis and membrane fusion. HA is an important target for drug and vaccine development.

Material Provided:

Each vial of NR-19864 contains approximately 100 μ L of purified monoclonal antibody in PBS. The concentration, expressed as mg per mL, is shown on the Certificate of Analysis.

Packaging/Storage:

NR-19864 was packaged aseptically in screw-capped plastic vials and is provided frozen on dry ice. The product should

be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be avoided.

Functional Activity:

NR-19864 reacts with the HA of both (H1N1)pdm09 and classical swine influenza viruses in indirect immunofluorescence assays. See Certificate of Analysis for details. NR-19864 is also reported to neutralize swine-origin H1N1 influenza viruses and to function in hemagglutination inhibition tests¹ and western blot assays.² In combination with NR-19866 and NR-19867, NR-19864 can be used in a sandwich ELISA that distinguishes (H1N1)pdm09 influenza A viruses from other swine-origin H1 viruses as well as human seasonal H1N1 and H3N2 viruses.³

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Monoclonal Anti-Influenza Virus H1 Hemagglutinin (HA), A/California/04/2009 (H1N1)pdm09, Clone S-OIV-3B2 (produced *in vitro*), NR-19864."

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Shao, H., et al. "A Novel Monoclonal Antibody Effective Against Lethal Challenge with Swine-Lineage and 2009 Pandemic H1N1 Influenza Viruses in Mice." Virology 417 (2011): 379-384. PubMed: 21774955.
2. D. R. Perez, personal communication.
3. Shao, H., et al. "A Monoclonal Antibody-Based ELISA for Differential Diagnosis of 2009 Pandemic H1N1." Influenza Other Respi. Viruses 5 Suppl. 1 (2011): 138-141. PubMed: 21761586.
4. Dawood, F. S., et al. "Emergence of a Novel Swine-Origin Influenza A (H1N1) Virus in Humans." N. Engl. J. Med. 360 (2009): 2605-2615. PubMed: 19423869. Erratum in N. Engl. J. Med. 361 (2009): 102.
5. Garten, R. J., et al. "Antigenic and Genetic Characteristics of Swine-Origin 2009 A(H1N1) Influenza Viruses Circulating in Humans." Science 325 (2009): 197-201. PubMed: 19465683.

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