

Product Information Sheet for NR-4282

Monoclonal Anti-Influenza A Virus Nucleoprotein (NP), Clones A1 and A3 (ascites blend, Mouse)

Catalog No. NR-4282

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Lot No. 7701149

For research use only. Not for human use.

Contributor:

BEI Resources

Manufacturer:

Chemicon® International

Product Description:

Antibody Class: IgG2a (A1); IgG1 (A3)

Mouse monoclonal antibodies specific to the nucleoprotein (NP) of influenza A virus derived from hybridoma A1 and A3 clones were produced separately in mouse ascites and blended (1:1).

All viruses with negative-sense RNA genomes encode a single-strand RNA-binding NP. The primary function of NP is to encapsidate the virus genome for the purposes of RNA transcription, replication and packaging.¹ NP serves as the structural protein in ribonucleoprotein particles and has been proposed to contain at least two different nuclear localization signals (NLS): an unconventional NLS, necessary for efficient synthesis of viral mRNA, and a bipartite NLS, which is essential for viral replication, likely due to its role in vRNA transcription.^{2,3} The crystal structure of influenza A virus NP (strain A/WSN/1933) has recently been determined (PDB: 2IQH).⁴

Material Provided:

Each vial of NR-4282 contains blended and lyophilized (0.5 mL containing no preservatives) mouse ascites fluid.

Packaging/Storage:

NR-4282 was packaged in glass serum vials with an aluminum crimp seal. The product is provided lyophilized and should be stored at -20°C to -40°C immediately upon arrival. At colder temperatures, the rubber stopper may become brittle and compromise the seal. **NR-4282 should be reconstituted with 0.5 mL of sterile distilled water.** Reconstituted material should be stored at -20°C to -40°C in undiluted aliquots. Repeated freeze-thaw cycles should be avoided.

Functional Activity:

Prior to being lyophilized, this monoclonal antibody blend was shown to be specific for influenza A viruses of the H1N1,

H2N2, H3N2, and H5N1 subtypes and did not cross react with influenza B virus, parainfluenza 1 virus, parainfluenza 2 virus, adenovirus, or respiratory syncytial virus as determined in immunofluorescence assays using infected cells.

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.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Monoclonal Anti-Influenza A Virus Nucleoprotein (NP), Clones A1 and A3 (ascites blend, Mouse), NR-4282."

Disclaimers:

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References:

1. Portela, A. and P. Digard. "The Influenza Virus Nucleoprotein: a Multifunctional RNA-binding Protein Pivotal to Virus Replication." J. Gen. Virol. 83 (2002): 723–734. PubMed: 11907320.
2. Ozawa, M., et al. "Contributions of Two Nuclear Localization Signals of Influenza A Virus Nucleoprotein to Viral Replication." J. Virol. 81 (2007): 30–41. PubMed: 17050598.
3. Cros, J. F., A. García-Sastre, and P. Palese. "An Unconventional NLS is Critical for the Nuclear Import of the Influenza A Virus Nucleoprotein and Ribonucleoprotein." Traffic 6 (2005): 205–213. PubMed: 15702989.
4. Ye, Q., R. M. Krug, and Y. J. Tao. "The Mechanism by which Influenza A Virus Nucleoprotein Forms Oligomers and Binds RNA." Nature 444 (2006): 1078–1082. PubMed: 17151603.
5. Galiano, M., et al. "Evidence of Human Metapneumovirus in Children in Argentina." J. Med. Virol. 72 (2004): 299–303. PubMed: 14695673.
6. Reid, A. H., et al. "Novel Origin of the 1918 Pandemic Influenza Virus Nucleoprotein Gene." J. Virol. 78 (2004): 12462–12470. PubMed: 15507633.

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