Monoclonal Pan Anti-Influenza B Virus Nucleoprotein (NP) (produced *in vitro*)

Catalog No. NR-59598
Sino Biological Catalog No. 40438-MM09

For research use only. Not for use in humans.

Contributor and Manufacturer:
Sino Biological, Inc., Wayne, Pennsylvania, USA

Product Description:
Antibody Class: IgG1
Clone: 09
Mouse monoclonal antibody prepared against the nucleoprotein (NP) of influenza B virus was purified from hybridoma supernatant by protein A affinity chromatography. The B cell hybridoma was generated by the fusion of mouse myeloma cells with splenocytes from mouse immunized with purified recombinant Influenza B (B/Florida/4/2006) NP protein (Sino Biological Cat # 40438-V08B; GenPept: ACF54251.1; Met1-Tyr560).[1]

Material Provided:
Each vial of NR-59598 contains approximately 50 µL of monoclonal antibody in phosphate buffered saline (PBS). The concentration, expressed as mg/mL, is shown on the Certificate of Analysis.

Packaging/Storage:
NR-59598 was packaged aseptically in screw-capped plastic vials and is provided frozen on dry ice. The product should be stored at -20°C to -80°C immediately upon arrival. NR-59598 can be stored at 2°C to 8°C for one month without detectable loss of activity. Freeze-thaw cycles should be avoided.

Functional Activity:
NR-59598 widely recognizes NP of Influenza B virus (Figures 1 and 2). Information on cross-reactivity in ELISA and western blot is shown in Table 1. The optimal concentration and dilution of the antibody to be used in a specific application should be determined by the user.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Monoclonal Pan Anti-Influenza B Virus Nucleoprotein (NP) (produced *in vitro*), NR-59598."

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 (BMBL). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

Disclaimers:
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References:
1. Lu, J., Personal Communication.

Support Provided by NIAID

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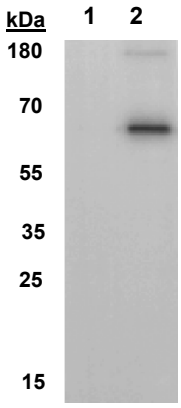
Figure 1: Representative Western Blot of NR-59598



Lane 1: Influenza A H3N2 (A/Darwin/9/2021)/(A/Darwin/6/2021) NP (Sino Biological 40858-V08B) (10 ng)
Lane 2: Influenza B (B/Austria/1359417/2021) NP (Sino Biological 40858-V08B) (10 ng)

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Figure 2: Representative Western Blot showing the specificity of NR-59598

Lane 1: H1N1 (A/Brevig Mission/1/1918) NP (Catalog# 40204-V08B)
Lane 2: H1N1 (A/Brisbane/02/2018 NP (Catalog# 40776-V08B)
Lane 3: H1N1 (A/California/07/2009) NP (Catalog# 40205-V08B)
Lane 4: H1N1 (A/Guangdong-Maonan/SWL1536/2019) NP (Catalog# 40723-V08B)
Lane 5: H1N1 (A/Hawaii/70/2019) NP (Catalog# 40724-V08B)
Lane 6: H1N1 (A/Michigan/45/2015 NP (Catalog# 40777-V08B)
Lane 7: H1N1 (A/Puerto Rico/8/34/Mount Sinai) NP (I116M) (Catalog# 11675-V08B)
Lane 8: H1N1 (A/Victoria/2570/2019)/(A/Wisconsin/588/2019) NP (Catalog# 40774-V08B)
Lane 9: H2N2 (A/Ann Arbor/6/1960) NP (Catalog# 40033-V08B)
Lane 10: H3N2 (A/Aichi/2/1968) NP (Catalog# 40207-V08B)
Lane 11: H3N2 (A/Cambodia/e0826360/2020 (H3N2)-like NP (Catalog# 40778-V08B)
Lane 12: H3N2 (A/Hong Kong/1/1968) NP (Catalog# 40208-V08B)
Lane 13: H3N2 (A/Hong Kong/2671/2019) NP (Catalog# 40753-V08B)
Lane 14: H3N2 (A/Hong Kong/45/2019) NP (Catalog# 40754-V08B)
Lane 15: H3N2 (A/Hong Kong/4801/2014 NP (Catalog# 40781-V08B)
Lane 16: H3N2 (A/Kansas/14/2017 NP (Catalog# 40779-V08B)
Lane 17: H3N2 (A/Switzerland/9715293/2013) NP (Catalog# 40499-V08B)
Lane 18: H7N9 (A/Anhui/1-BALF_RG6/2013) NP (Catalog# 40110-V08B)
Lane 19: H7N9 (A/Shanghai/2/2013) NP (Catalog# 40111-V08B)
Lane 20: Influenza B (B/Brisbane/60/2008) NP (Catalog# 40783-V08B)
Lane 21: Influenza B (B/Colorado/06/2017) NP (Catalog# 40782-V08B)
Lane 22: Influenza B (B/Florida/4/2006) NP (Catalog# 40438-V08B)
Lane 23: Influenza B (B/Phuket/3073/2013) NP (Catalog# 40500-V08B)
Lane 24: Influenza B (B/Washington/02/2019) NP (Catalog# 40755-V08B)

Sample: Recombinant Protein 10 ng

Table 1: Cross-reactivity of NR-59598 Nucleoprotein (NP) in ELISA and Western blot

Cross-reactivity	Immunogen	Catalog #. (Sino Biological)
ELISA and WB	Influenza B (B/Austria/1359417/2021) NP	40861-V08B
	Influenza B (B/Brisbane/60/2008) NP	40783-V08B
	Influenza B (B/Colorado/06/2017) NP	40782-V08B
	Influenza B (B/Florida/4/2006) NP	40438-V08B
	Influenza B (B/Phuket/3073/2013) NP	40500-V08B
	Influenza B (B/Washington/02/2019) NP	40755-V08B
ELISA	Influenza B (B/Victoria/705/2018) NP	40854-V08B
Minimal in ELISA	SARS-CoV-2 Nucleocapsid Protein	40588-V08B
None in ELISA and WB	H1N1 (A/Brevig Mission/1/1918) NP	40204-V08B
	H1N1 (A/Brisbane/02/2018 NP	40776-V08B
	H1N1 (A/California/07/2009) NP	40205-V08B
	H1N1 (A/Guangdong-Maonan/SWL1536/2019) NP	40723-V08B
	H1N1 (A/Hawaii/70/2019) NP	40724-V08B
	H1N1 (A/Michigan/45/2015 NP	40777-V08B
	H1N1 (A/Puerto Rico/8/34/Mount Sinai) NP	11675-V08B
	H1N1 (A/Victoria/2570/2019)/(A/Wisconsin/588/2019) NP	40774-V08B
	H2N2 (A/Ann Arbor/6/1960) NP	40033-V08B
	H3N2 (A/Aichi/2/1968) NP	40207-V08B
	H3N2 (A/Cambodia/e0826360/2020 (H3N2)-like NP	40778-V08B
	H3N2 (A/Hong Kong/1/1968) NP	40208-V08B
	H3N2 (A/Hong Kong/2671/2019) NP	40753-V08B
	H3N2 (A/Hong Kong/45/2019) NP	40754-V08B
	H3N2 (A/Hong Kong/4801/2014) NP	40781-V08B
	H3N2 (A/Kansas/14/2017) NP	40779-V08B
	H3N2 (A/Switzerland/9715293/2013) NP	40499-V08B
	H7N9 (A/Anhui/1-BALF_RG6/2013) NP	40110-V08B
	H7N9 (A/Shanghai/2/2013) NP	40111-V08B
None in ELISA	HCoV-229E Nucleocapsid Protein	40640-V07E
	HCoV-NL63 Nucleocapsid Protein	40641-V07E
	HCoV-HKU1 Nucleocapsid Protein	40642-V07E
	HCoV-OC43 Nucleocapsid Protein	40643-V07E
None in WB	H3N2 (A/Darwin/9/2021)/(A/Darwin/6/2021) NP	40858-V08B