# Mouse Anti-Influenza B Nucleoprotein [3E9/B2]: MC0166

**Intended Use:** For Research Use Only

**Description:** Influenza virus is a type of enveloped, segmented, negative-sense, single-stranded RNA virus of the Orthomyxoviridae family. There are three major antigenic types of influenza virus that are clinically relevant to humans, including Flu A, B and C. Flu A viruses affect humans and bird populations, whilst Flu B and C only infect humans. Based on the antigenicity of the glycoproteins, influenza A viruses are subdivided into sixteen H (H1-H16) and nine N (N1-N9) subtypes. The main antigenic determinants of influenza A and B viruses are the hemagglutinin (HA) and neuraminidase (NA) transmembrane glycoproteins. Projections of HA and NA cover the surface of the virus particle. NA forms a tetramer with an average molecular weight of 220 kDa (~55 kDa per monomer). The matrix (M) protein of influenza A virus is one of the two group-specific internal proteins of the virion, The non-structural protein (NP) exists as a homeodimer (molecular weight of 52 kDa) consisting of two identical monomers (each ~26 kDa). In healthy individuals, Influenza B causes a self-limiting respiratory illness. However, Influenza B can cause severe illness and hospitalization in the young, the elderly and high-risk patients. Effective vaccines are available for individuals at risk of developing severe disease, but must be developed and administered annually due to the rapidly-evolving nature of the virus. Quadrivalent vaccines that include two subtypes of Influenza A and B, are replacing trivalent vaccines in an attempt to provide greater protection against Influenza B viral infections.

**Specifications**

| | |
|---|---|
| Clone: | 3E9/B2 |
| Source: | Mouse |
| Isotype: | IgG2a/k |
| Reactivity: | Influenza B |
| Immunogen: | Unpurified influenza B virus (B/Lee/40) for primary intranasal immunization, boosted intravenously with purified influenza B virus disrupted with Triton X-100 for 40 min at 37C |
| Localization: | Nucleus |
| Formulation: | Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3) |
| Storage: | Store at 2°- 8°C |
| Applications: | IHC, ELISA, ICC/IF, WB |

Package:

| Description | Catalog No. | Size |
|---|---|---|
| Influenza B Nucleoprotein Concentrated | MC0166 | 1 ml |

**IHC Procedure***

| | |
|---|---|
| Positive Control Tissue: | Influenza B infected tissues |
| Concentrated Dilution: | 10-100 |
| Pretreatment: | None |
| Incubation Time and Temp: | Overnight @ 4°C |
| Detection: | Refer to the detection system manual |

* Result should be confirmed by an established diagnostic procedure.

**References:**

1. An influenza virus-triggered SUMO switch orchestrates co-opted endogenous retroviruses to stimulate host antiviral immunity. Schmidt N, et al. Proc Natl Acad Sci U S A 116:17399-17408, 2019.
2. Domestic pigs are susceptible to infection with influenza B viruses. Ran Z, et al. J Virol 89:4818-26, 2015.
3. Paquette SG et al. Influenza Transmission in the Mother-Infant Dyad Leads to Severe Disease, Mammary Gland Infection, and Pathogenesis by Regulating Host Responses. PLoS Pathog 11:e1005173 (2015).
4. An eight-segment swine influenza virus harboring H1 and H3 hemagglutinins is attenuated and protective against H1N1 and H3N2 subtypes in pigs. Masic A, et al. J Virol 87:10114-25, 2013.
5. Treatment with the reactive oxygen species scavenger EUK-207 reduces lung damage and increases survival during 1918 influenza virus infection in mice. Kash JC, et al. Free Radic Biol Med 67C:235-247, 2013.



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