

**DESCRIPTION**

<b>Source</b>	Human embryonic kidney cell, HEK293-derived influenza a virus h3n2 Hemagglutinin protein Gln17-Trp530, with a C-terminal 6-His tag Accession # Q91MA7.1
<b>N-terminal Sequence Analysis</b>	No results obtained: Gln17 predicted
<b>Predicted Molecular Mass</b>	58 kDa

**SPECIFICATIONS**

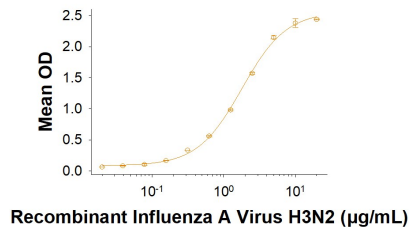
<b>SDS-PAGE</b>	80-90 kDa, under reducing conditions.
<b>Activity</b>	Measured by its binding ability in a functional ELISA. When Recombinant Human Galectin-1 (Catalog # 1152-GA) immobilized at 10.00 µg/mL, 100 µL/well, the concentration of Recombinant Influenza A Virus H3N2 Hemagglutinin His-tag (Catalog # 10944-HA) that produces 50% of the optimal binding response is 0.35-3.50 µg/mL.
<b>Endotoxin Level</b>	<1.0 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 100 µg/mL in PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

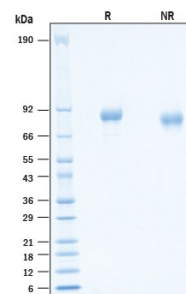
**DATA**

**Binding Activity**



**Recombinant Influenza A Virus H3N2 Hemagglutinin His-tag Protein Binding Activity.** When Recombinant Human Galectin-1 (Catalog # 1152-GA) immobilized at 10.00 µg/mL, 100 µL/well, the concentration of Recombinant Influenza A Virus H3N2 Hemagglutinin His-tag (Catalog # 10944-HA) that produces 50% of the optimal binding response is 0.35 - 3.50 µg/mL.

**SDS-PAGE**



**Recombinant Influenza A Virus H3N2 Hemagglutinin His-tag Protein SDS-PAGE.** 2 µg/lane of Recombinant Influenza A Virus H3N2 Hemagglutinin His-tag Protein (Catalog # 10944-HA) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 80-90 kDa.

**BACKGROUND**

Influenza A (H3N2) has predominated recent influenza seasons, which caused several hospitalizations in many countries (1). H3N2 viruses have been in circulation since the onset of the 1968 pandemic (2). This strain was a reassortant, composed of the six gene segments from H2N2 viruses, but with the hemagglutinin and polymerase basic protein 1 segments derived from an avian source (3, 4). The hemagglutinin protein of the Influenza A virus (strain A/Hong Kong/1/1968 H3N2) is composed of 550 residues, which includes the Hemagglutinin chains HA1 and HA2 (5). Hemagglutinin (HA) and Neuraminidase (NA) are the two predominant membrane glycoproteins found on the surface of influenza virus. HA is a lectin that binds sialic acid on host cell membrane. NA is a sialic acid hydrolase that specifically clips off terminally located sialic acid on host cell surface. The two proteins are essential for the infectious cycle of the influenza virus. Galectin-1 can bind to the envelope glycoproteins of influenza virus and inhibit viral infectivity, which may be attributed to the multivalent binding and cross-linking activities of galectin-1. Furthermore, galectin-1 may also be explored for targeting other viruses with glycoproteins on their surface (6).

**References:**

1. Wan, H. *et al.* (2019) *Nat. Microbiol.* **4**:2216.
2. Krause, J.C. *et al.* (2012) *J. Virol.* **86**:6334.
3. Kawaoka, Y. *et al.* (1989) *J. Virol.* **63**:4603.
4. Alymova, I.V. *et al.* (2011) *J. Virol.* **85**:12324.
5. Brown, E.G. *et al.* (2001) *Proc. Natl. Acad. Sci. USA* **98**:6883.
6. Yang, M.L. *et al.* (2011) *J. Virol.* **85**:10010.