SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

PRODUCT INFORMATION

Influenza A H5N1 HA1 (strain A/Japanese white eye/Hong Kong/1038/2006) (recombinant) - Biotinylated

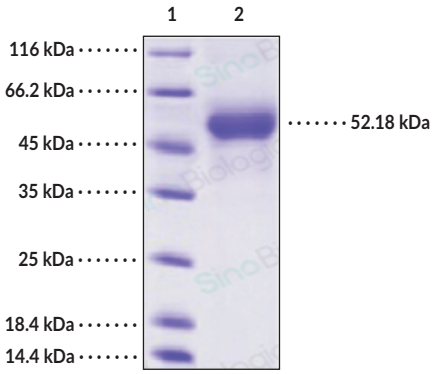
Item No. 42015

Overview and Properties

Synonym:	Influenza A H5N1 Hemagglutinin 1
Source:	Recombinant influenza A H5N1 C-terminal His-tagged HA1 expressed in HEK293 cells
Amino Acids:	17-340
Uniprot No.:	A0FFY3
Molecular Weight:	38 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥90% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile PBS
Endotoxin Testing:	<1.0 EU/µg, determined by the LAL endotoxin assay
Protein Concentration:	***batch specific*** mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Influenza A H5N1 HA1 (strain A/Japanese white eye/Hong Kong/1038/2006) (recombinant) - Biotinylated

SDS-PAGE Analysis of Influenza A H5N1 HA1 (strain A/Japanese white eye/Hong Kong/1038/2006) (recombinant) - Biotinylated. This protein has a calculated molecular weight of 38 kDa. It has an apparent molecular weight of 52.18 due to glycosylation.

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION

Description

Influenza A H5N1 HA is a type I membrane glycoprotein involved in receptor binding and virus-host cell fusion.[1-3] It is produced as a precursor protein, HA0, which is composed of a stalk and head domain and forms homotrimers on the viral surface.[1,4] The HA0 precursor is cleaved into subunits, HA1 and HA2, which are responsible for host cell surface receptor binding and endosomal membrane fusion, respectively, and this cleavage is required for endosomal fusion.[1] For influenza A and influenza B, which are low pathogenic influenza viruses, cleavage occurs via trypsin-like proteases, such as transmembrane serine protease 2 (TMPRSS2), which is essential for influenza A HA, but not influenza B HA, cleavage.[5,6,7] Cleaved influenza A H1N1 HA binds to terminal α2,6- or α2,3-sialic acids on glycoproteins or glycolipids on the host cell surface *via* the receptor-binding domain in the HA1 subunit, which triggers endocytosis of the virus and trafficking of the vesicle into the endosome.[4,8,9] The low pH environment of the endosome triggers viral rearrangement into a prefusion conformation, and the HA2 subunit facilitates fusion with the endosomal membrane to release viral ribonucleoproteins into the cytosol where they are relocated to the nucleus for viral replication.[4] A monoclonal antibody targeting a highly conserved epitope of influenza A H5N1 HA1 induces neutralization of influenza A H5N1 pseudoviruses *in vitro* and prevents mortality in a mouse model of lethal influenza A H5N1 infection.[10] Cayman's Influenza A H5N1 HA1 (strain A/Japanese white eye/Hong Kong/1038/2006) (recombinant) - Biotinylated protein consists of 340 amino acids, has a calculated molecular weight of 38 kDa, and a predicted N-terminus of Asp17 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 52.18 kDa due to glycosylation.

References

1. Russell, C.J. Hemagglutinin stability and its impact on influenza A virus infectivity, pathogenicity, and transmissibility in avians, mice, swine, seals, ferrets, and humans. *Viruses* **13(5)**, 746 (2021).
2. Gamblin, S.J. and Skehel, J.J. Influenza hemagglutinin and neuraminidase membrane glycoproteins. *J. Biol. Chem.* **285(37)**, 28403-28409 (2010).
3. Velkov, T., Ong, C., Baker, M.A., *et al.* The antigenic architecture of the hemagglutinin of influenza H5N1 viruses. *Mol. Immunol.* **56(4)**, 705-719 (2013).
4. Dou, D., Revol, R., Östbye, H., *et al.* Influenza A virus cell entry, replication, virion assembly and movement. *Front. Immunol.* **9**, 1581 (2018).
5. Sakai, K., Ami, Y., Nakajima, N., *et al.* TMPRSS2 independency for haemagglutinin cleavage in vivo differentiates influenza B virus from influenza A virus. *Sci. Rep.* **6**, 29430 (2016).
6. Böttcher-Friebertshäuser, E., Lu, Y., Meyer, D., *et al.* Hemagglutinin activating host cell proteases provide promising drug targets for the treatment of influenza A and B virus infections. *Vaccine* **30(51)**, 7374-7380 (2012).
7. Limburg, H., Harbig, A., Bestle, D., *et al.* TMPRSS2 is the major activating protease of influenza A virus in primary human airway cells and influenza B virus in human type II pneumocytes. *J. Virol.* **93(21)**, e00649-19 (2019).
8. Long, J.S., Mistry, B., Haslam, S.M., *et al.* Host and viral determinants of influenza A virus species specificity. *Nat. Rev. Microbiol.* **17(2)**, 67-81 (2019).
9. Wang, Q., Tian, X., Chen, X., *et al.* Structural basis for receptor specificity of influenza B virus hemagglutinin. *Proc. Natl. Acad. Sci. USA* **104(43)**, 16874-16879 (2007).
10. Du, L., Jin, L., Zhao, G., *et al.* Identification and structural characterization of a broadly neutralizing antibody targeting a novel conserved epitope on the influenza virus H5N1 hemagglutinin. *J. Virol.* **87(4)**, 2215-2225 (2013).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM