Matrix Protein 1/M1 Protein, H3N2 (AFM71858, His)

Cat. No.:	HY-P74760
Synonyms:	Influenza A H3N2 (A/Aichi/2/1968) Matrix protein 1 / M1 Protein (His)
Species:	Virus
Source:	E. coli
Accession:	AFM71858 (M1-K252)
Gene ID:	/
Molecular Weight:	Approximately 35 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 1 mM EDTA, 50 mM Tris, 50 mM NaCl, 5% Glycerol. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Matrix protein 1 (M1) is integral to various stages of virus replication, playing essential roles from virus entry and uncoating to the assembly and budding of the virus particle. M1's binding to ribonucleocapsids (RNPs) in the nucleus is believed to inhibit viral transcription, and its interaction with viral NEP promotes the nuclear export of the complex, targeting it to the virion assembly site at the apical plasma membrane in polarized epithelial cells. Interactions with NA and HA potentially bring M1 into lipid rafts, despite it being a non-raft-associated protein. Within the virion, M1 forms a continuous shell on the inner side of the lipid bilayer, binding the RNP. During virus entry, the M2 ion channel acidifies the internal virion core, leading to M1 dissociation from the RNP. M1-free RNPs are then transported to the nucleus, allowing viral transcription and replication. Moreover, M1 determines the virion's shape, influencing whether it is spherical or filamentous. Clinical isolates of influenza often feature a significant proportion of filamentous virions, crucial for infecting neighboring cells, while spherical virions are better suited for aerosol-based spread between host organisms[1][2].

Caution: Product has not been fully validated for medical applications. For research use only.

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