

Matrix protein 2 Protein, Influenza A virus 1934 H1N1 (Cell-Free, His)

Cat. No.:	HY-P702370
Synonyms:	Matrix protein 2; Proton channel protein M2
Species:	Virus
Source:	E. coli Cell-free
Accession:	P06821 (M1-E97)
Gene ID:	956528
Molecular Weight:	12.5 kDa

PROPERTIES

AA Sequence	<p> M S L L T E V E T P I R N E W G C R C N G S S D P L A I A A N I I G I L H L I L W I L D R L F F K C I Y R R F K Y G L K G G P S T E G V P K S M R E E Y R K E Q Q S A V D A D D G H F V S I E L E </p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μ m filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.
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	<p>Matrix protein 2 (M2) plays a pivotal role as it forms a proton-selective ion channel necessary for the efficient release of the viral genome during virus entry. Upon attachment to the cell surface, the virion undergoes endocytosis, and the acidification of the endosome activates M2 ion channel activity. Proton influx disrupts interactions between viral ribonucleoprotein (RNP), matrix protein 1 (M1), and lipid bilayers, freeing the viral genome for migration to the host cell nucleus. Additionally, M2 is involved in the viral protein secretory pathway, elevating intravesicular pH in acidic compartments like the trans-Golgi network, preventing premature fusion-active conformation of newly formed hemagglutinin. Notably, the M2 protein in most influenza A strains is inhibited by amantadine and rimantadine, leading to viral uncoating incapacity, although the emergence of amantadine-resistant variants is typically rapid.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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