

PLY Protein, Streptococcus pneumoniae serotype 4 (Baculovirus, His-Myc)

Cat. No.:	HY-P72057
Synonyms:	ply; SP_1923; Pneumolysin; Ply; Thiol-activated cytolysin
Species:	Others
Source:	Sf9 insect cells
Accession:	P0C2J9 (A2-D471)
Gene ID:	/
Molecular Weight:	Approximately 56.8 kDa

PROPERTIES

AA Sequence	<pre> ANKAVNDFIL AMNYDKKKLL THQGESIENR FIKEGNQLPD EFVVIERKKR SLSTNTSDIS VTATNDSRLY PGALLVVDDE LLENNPTLLA VDRAPMTYSI DLPGLASSDS FLQVEDPSNS SVRGAVNDLL AKWHQDYGQV NNVPARMQYE KITAHSMERL KVKFGSDFEK TGNSLDIDFN SVHSGEKQIQ IVNFKQIYYT VSVD AVKNPG DVFQDTVTVE DLKQRGISAE RPLVYISSVA YGRQVYLKLE TTSKSDEVEA AFEALIKGVK VAPQTEWKQI LDNTEVKAVI LGGDPSSGAR VVTGKVD MVE DLIQEGSRFT ADHPGLPISY TTSFLRDNVV ATFQNSTDYV ETKVTAYRNG DLLLDHSGAY VAQYYITWNE LSYDHQGKEV LTPKAWRNG QDLTAHFTTS IPLKGNVRNL SVKIRECTGL AWEWWRTVYE KTDLPLVRKR TISIWGTTLY PQVEDKVEN D </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm solution of Tris-based buffer, 50% Glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
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	The PLY protein operates as a cholesterol-dependent toxin, inducing cytolysis by forming pores in host membranes
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containing cholesterol. Following its binding to target membranes, the protein undergoes a significant conformational change, facilitating its insertion into the host membrane and the subsequent formation of an oligomeric pore complex. The presence of cholesterol is crucial for various stages of this process, including binding to host membranes, membrane insertion, and pore formation, with cholesterol binding mediated by a Thr-Leu pair in the C-terminus. Notably, PLY protein exhibits reversibility and can be inactivated by oxidation. The resulting homooligomeric pore complex, comprising 35 to 50 subunits, is formed upon insertion into the host membrane, contributing to the protein's cytolytic activity.

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

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