

SPG3A/ATL1 Protein, Human (sf9, GST)

Cat. No.:	HY-P77214
Synonyms:	Atlastin-1; GTP-binding protein 3; GBP-3; ATL1; SPG3A
Species:	Human
Source:	Sf9 insect cells
Accession:	Q8WXF7 (M1-T447)
Gene ID:	51062
Molecular Weight:	Approximately 66 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 50 mM Tris, 100 mM NaCl, 0.5 mM PMSF, 0.5 mM EDTA, 0.5 mM GSH, pH 8.0. 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.
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	<p>SPG3A/ATL1 Protein functions as a GTPase that plays a pivotal role in membrane tethering through the formation of trans-homooligomers, facilitating homotypic fusion of endoplasmic reticulum (ER) membranes. Its involvement extends to endoplasmic reticulum tubular network biogenesis, contributing to the intricate organization of this cellular structure. Beyond its primary function, SPG3A/ATL1 may also participate in the regulation of Golgi biogenesis and axonal development. In its monomeric state as an apoprotein and in the GDP-bound form, SPG3A/ATL1 transforms into a homodimer when bound to GTP, demonstrating a dynamic interplay between its different states. The protein engages in various interactions with key cellular components, including MAP4K4, REEP5, RTN3, RTN4, SPAST, TMED2, REEP1, CPT1C, and ARL6IP1, highlighting its involvement in a complex network of molecular associations. Additionally, SPG3A/ATL1 interacts with ZFYVE27, further expanding its regulatory repertoire.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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