GM2A Protein, Human (sf9, His)

Cat. No.:	HY-P75160
Synonyms:	Ganglioside GM2 activator; GM2-AP; Sphingolipid activator protein 3; SAP-3
Species:	Human
Source:	Sf9 insect cells
Accession:	AAA35907.1 (H24-I193)
Gene ID:	2760
Molecular Weight:	Approximately 25 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM Tris, 500 mM NaCl, pH 7.4, 10% 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	Ganglioside GM2 activator (GM2A) is a small glycolipid transport protein which acts as a substrate specific co-factor for the lysosomal enzyme beta-hexosaminidase A. Beta-hexosaminidase A, together with GM2A, catalyzes the degradation of the ganglioside GM2, and other molecules containing terminal N-acetyl hexosamines. GM2A accommodate several single chain phospholipids and fatty acids, is a lipid transfer protein that stimulates the enzymatic processing of gangliosides, and also T-cell activation through lipid presentation. It extracts single GM2 molecules from membranes and presents them in soluble form to beta-hexosaminidase A for cleavage of N-acetyl-D-galactosamine and conversion to GM3. In addition, GM2A has cholesterol transfer activity. Mutations in the GM2A gene cause AB GM2 gangliosidosis or the AB variant of Tay-Sachs disease [1][2].

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