

Human GM2A Protein (His Tag)

Catalog Number: 13246-H08B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

GM2-AP; SAP-3

Protein Construction:

A DNA sequence encoding the human GM2A (AAA35907.1) (Met 1-Ile 193) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 96 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Val 22

Molecular Mass:

The secreted recombinant human GM2A (pro form) comprises 180 amino acids and has a predicted molecular mass of 19.8 kDa. The apparent molecular mass of rh GM2A is approximately 25 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 10% gly

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

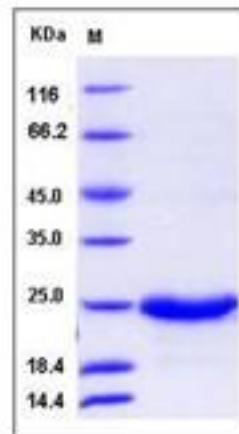
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

GM2A (GM2 ganglioside activator), is a lipid transfer protein which belongs to the ML domain family. GM2A can accommodate several single chain phospholipids and fatty acids. It also exhibits some calcium-independent phospholipase activity. GM2A binds gangliosides and stimulates ganglioside GM2 degradation. It stimulates only the breakdown of ganglioside GM2 and glycolipid GA2 by beta-hexosaminidase A. GM2A acts as a substrate specific co-factor for the lysosomal enzyme β -hexosaminidase A. β -hexosaminidase A, together with GM2 ganglioside activator, catalyzes the degradation of the ganglioside GM2, and other molecules containing terminal N-acetyl hexosamines. 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. Defects in GM2A are the cause of GM2-gangliosidosis type AB (GM2GAB), also known as Tay-Sachs disease AB variant.

References

3.Wright CS, *et al.* (2003) Structural analysis of lipid complexes of GM2-activator protein. *J Mol Biol.* 331(4):951-64.

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