

Mouse ASAH2 Protein (His Tag)

Catalog Number: 50006-M07H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

AI585898

Protein Construction:

A DNA sequence encoding the Luminal domain (Thr 34-Thr 756) of mouse ASAH2 (NP_061300.1) precursor was expressed with a N-terminal polyhistidine tag.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to hydrolyze the substrate C12:0 ceramide into sphingosine and dodecanoic acid. The specific activity is > 3,000 pmoles/min/μg.

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: His

Molecular Mass:

The secreted recombinant mouse ASAH2 consists of 739 amino acids and has a calculated molecular mass of 82 kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 105-115 kDa protein in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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:

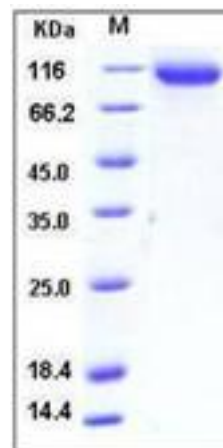
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

ASAH2 (N-acylsphingosine amidohydrolase 2), also known as neutral ceramidase, is a type II integral membrane protein that can be cleaved to produce a soluble secreted protein. The enzyme is abundant in the brush border membranes of the intestine, and also expressed in several tissues such as kidney, brain and liver. The primary structure of ASAH2/neutral ceramidase is highly conserved from bacteria to humans, however, there is a clear difference in the molecular architecture. The murine ASAH2 possesses 'amucin box', a Ser/Thr/Pro-rich domain glycosylated with O-glycans which is necessary to retain the enzyme on the plasma membrane as a type II integral protein. The major physiological function of ASAH2/neutral ceramidase is the metabolism of dietary sphingolipids, and thus plays a role in the generation of messenger molecules such as sphingosine and sphingosine 1-phosphate.

References

1. Tani M, *et al.* (2000) Molecular cloning of the full-length cDNA encoding mouse neutral ceramidase. A novel but highly conserved gene family of neutral/alkaline ceramidases. *J Biol Chem.* 275(15): 11229-34.
2. Franzen R, *et al.* (2002) Nitric oxide induces neutral ceramidase degradation by the ubiquitin/proteasome complex in renal mesangial cell cultures. *FEBS Lett.* 532(3): 441-4.
3. Kono M, *et al.* (2006) Neutral ceramidase encoded by the Asah2 gene is essential for the intestinal degradation of sphingolipids. *J Biol Chem.* 281(11): 7324-31.

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