

Recombinant Human ASAH2 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50050

Size: 10ug, 100ug

Protein Name: Neutral ceramidase (N-CDase) (NCDase) (EC 3.5.1.-) (EC 3.5.1.23) (Acylsphingosine deacylase 2) (BCDase) (LCDase) (hCD) (N-acylsphingosine amidohydrolase 2) (Non-lysosomal ceramidase) [Cleaved into: Neutral ceramidase soluble form]

Synonym: ASAH2, HNAC1

UniProt ID: Q9NR71

UniProt Link: www.uniprot.org/uniprotkb/Q9NR71/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 780 AA

Molecular Weight: 86 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAKRTFSNLETFLIFLLVMMSAITVALLSLLFITSGTIENHKDLGGHFFSTTQSPPATQGGSTAAQRSTAT
QHSTATQSSTATQTSPVPLTPESPLFQNFSGYHIGVGRADCTGQVADINLMGYGKSGQNAQGILTRL
YSRAFIMAEPDGNSRTVFVSDIGMVSQRLRLEVLNRLQSKYGSLYRRDNVILSGTHTHSGPAGYFQ
YTVFVIASEGFSNQTFQHMTVGILKSIDIAHTNMKPGKIFINKGNVDGVQINRSPYSYLQNPQSERARY
SSNTDKEMIVLKMVDLNGDDLGLISWFAIHPVSMNNSNHLVNSDNVGYASYLLEQEKNKGYPGQG
PFVAAFASSNLGDVSPNIGPRCINTGESCDNANSTCPIGGPSMCIAGKPGQDMFDSTQIIGRAMYQ
RAKELYASASQEVGTGPLASAHQWVDMTDVTWLNSTHASKTCKPALGYSFAAGTIDGVGGLNFTQ
GKTEGDPFWDITRDQILGKPSEEIKECHKPKPILLHTGELSKPHPWHPDIVDVQIITLGLSLAITAIPGEFT
TMSGRRRLREAVQAEFASHGMQNMVVISGLCNVYTHYITTYEEYQAQRYEAASTIYGPHTLSAYIQL
FRNLAKAIATDVTANLSRGPEPPFFKQLIVPLIPSIVDRAPKGRTFGDVLQPAKPEYRVGEVAEVIFVG
ANPKNSVQNQTHQTFLTVEKYEATSTSWQIVCNDASWETRFYWHKGLLGLSNATVEWHIPDTAQ
GIYRIRYFGHNRKQDILKPAVILSFEGTSPAFAEVVTI

3. Buffer Composition



Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Neutral ceramidase (N-CDase) (NCDase) (EC 3.5.1.-) (EC 3.5.1.23) (Acylsphingosine deacylase 2) (BCDase) (LCDase) (hCD) (N-acylsphingosine amidohydrolase 2) (Non-lysosomal ceramidase) [Cleaved into: Neutral ceramidase soluble form] produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Plasma membrane ceramidase that hydrolyzes sphingolipid ceramides into sphingosine and free fatty acids at neutral pH (PubMed:10781606, PubMed:16229686, PubMed:26190575). Ceramides, sphingosine, and its phosphorylated form sphingosine-1-phosphate are bioactive lipids that mediate cellular signaling pathways regulating several biological processes including cell proliferation, apoptosis and differentiation (PubMed:15946935, PubMed:19345744, PubMed:24798654). Also catalyzes the reverse reaction allowing the synthesis of ceramides from fatty acids and sphingosine (PubMed:11278489, PubMed:17475390). Together with sphingomyelinase, participates in the production of sphingosine and sphingosine-1-phosphate from the degradation of sphingomyelin, a sphingolipid enriched in the plasma membrane of cells (PubMed:16061940). Also participates in the hydrolysis of ceramides from the extracellular milieu allowing the production of sphingosine-1-phosphate inside and outside cells (By similarity). This is the case for instance with the digestion of dietary sphingolipids in the intestinal tract (By similarity).

Subcellular Localization: [Neutral ceramidase]: Cell membrane ; Single-pass type II membrane protein . Membrane raft ; Single-pass type II membrane protein . Membrane, caveola ; Single-pass type II membrane protein . Golgi apparatus membrane ; Single-pass type II membrane protein . Mitochondrion . Secreted, extracellular exosome . Note=Enriched in exosomes upon stimulation by cytokine (PubMed:24798654). Enriched in caveolae and lipid rafts (By similarity). The localization to the mitochondrion could not be confirmed (PubMed:15845354).; [Neutral ceramidase soluble form]: Secreted .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.