

## ASAH2 Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	N-acylsphingosine amidohydrolase (non-lysosomal ceramidase) 2;A1585898
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. Predicted N terminal: His
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	B9EHG7
Molecular Weight:	82 kDa (predicted); 105-115 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological 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.
Purity:	≥ 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

**Stability & Storage:**

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

**Shipping:**

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

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.

### Reference

- 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.
- 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.
- 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.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286    E\_mail: info@targetmol.com    Address: 34 Washington Street, Wellesley Hills, MA 02481