Human CellExp™ Acid Sphingomyelinase, Human Recombinant

CATALOG NO: P1443-10 10 µg
P1443-50 50 µg

ALTERNATE NAMES: Sphingomyelin phosphodiesterase, aSMase, acid sphingomyelinase, SMPD1, ASM, EC:3.1.4.12

MOL. WT. 68 kDa (C-terminal 8×His tag)

SOURCE: HEK 293 cells

PURITY: > 95% SDS-PAGE.

FORM: Lyophilized

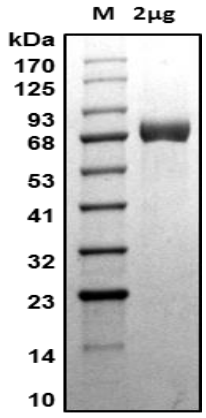
FORMULATION: Lyophilized from 0.22 µm filtered 50 mM Tris-HCl and 150 mM NaCl, pH 8.0 with 5% trehalose

RECONSTITUTION: Centrifuge the vial prior to opening. Reconstitute in distilled water. Do not vortex.

STORAGE CONDITIONS: Aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles. Reconstituted enzyme aliquots are stable for up to 3 months.

DESCRIPTION: Sphingomyelin phosphodiesterase, which is encoded by the SMPD1 gene, is also known as acid sphingomyelinase or aSMase. There are two types of sphingomyelinases: ASM (acid) and NSM (neutral). ASM / aSMase can catalyze the hydrolysis of sphingomyelin to ceramide and phosphorylcholine with cofactor Zn2+. Ceramide, a bioactive lipid, has emerged as an important signaling molecule involved in a variety of cellular processes such as cell differentiation, apoptosis, and proliferation. Mutations in the SMPD1 gene cause Niemann–Pick disease types A and B due to deficiency in hydrolyzing sphingomyelin to ceramide. Activation of ASM can be achieved by the removal of its C terminal cysteine residue or C-terminal truncation. BioVision's recombinant human ASM was expressed from HEK293 cells without the last three C terminal residues, and is therefore constitutively active.

AMINO ACID SEQUENCE: His 62 - Pro 628



4-20% SDS-PAGE of aSMase/ASM: 2 µg of the active aSMase is loaded under reducing conditions and stained with Coomassie Blue. A protein band around 68 kDa can be detected due to glycosylation.

RELATED PRODUCTS:

- Alkaline Sphingomyelinase Activity Assay Kit (Colorimetric) (K987)
- Sphingomyelinase Activity Colorimetric Assay Kit (K599)
- Acid Sphingomyelinase Assay Kit II (Colorimetric) (K192)
- Sphingomyelinase Activity Fluorometric Assay Kit (K574)

FOR RESEARCH USE ONLY! Not to be used on humans.