Technical Data Sheet

Purified Mouse Anti-Acid Ceramidase

Material Number:	612302			
Size:	50 µg			
Concentration:	250 µg/ml			
Clone:	23/Acid Ceramidase			
Immunogen:	Human Acid Ceramidase aa. 88-182			
Isotype:	Mouse IgG1			
Reactivity:	QC Testing: Human			
-	Tested in Development: Dog			
Target MW:	13 kDa			
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium			
	azide.			

Description

Ceramide is a sphingolipid that exhibits a wide variety of functions, including monocyte differentiation, apoptosis, neurite outgrowth, and Ca2+ transport. It also serves as the precursor of many sphingolipids and anchors these into the outer leaflet of the plasma membrane via hydrophobic interactions. Acid ceramidase is a lysosomal enzyme that was purified from human urine. It is synthesized as a 55kDa precursor protein, which is then processesed into the mature α -subunit (13kDa) and β -subunit (40kDa). Acid ceramidase catalyzes the hydrolysis of ceramide into free fatty acid and sphingosine. Sphingosine, and its phosphorylated form, sphingosine-1-phosphate (SPP), have been shown to inhibit PKC activity and act as a second messenger in cell proliferation and differentiation. Acid ceramidase is also the cause of a lysosomal storage disorder known as Farber's disease. This disease is characterized by an accumulation of ceramide in tissues, leading to swelling and pain of the joints and extremities, pulmonary insufficiency, and death at an early age. Thus, acid ceramidase is necessary in the hydrolysis of ceramide and is the cause of Farber's disease.



Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

Application Notes

Application						
	Western blot	Routinely Tested				
	Immunofluorescence	Not Recommended				

Product Notices

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before
- discarding to avoid accumulation of potentially explosive deposits in plumbing.

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4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References Bernardo K, Hurwitz R, Zenk T, et al. Purification, characterization, and biosynthesis of human acid ceramidase. J Biol Chem. 1995; 270(19):11098-11102.

(Biology) Ferlinz K, Kopal G, Bernardo K, et al. Human acid ceramidase: processing, glycosylation, and lysosomal targeting. J Biol Chem. 2001; 276(38):35352-35360. (Biology)

Strelow A, Bernardo K, Adam-Klages S, et al. Overexpression of acid ceramidase protects from tumor necrosis factor-induced cell death. J Exp Med. 2000; 192(5):601-611.(Biology)