bs-6318R **[Primary Antibody]**

Acid sphingomyelinase Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 6609 **SWISS:** P17405

Target: Acid sphingomyelinase

Immunogen: KLH conjugated synthetic peptide derived from human Acid sphingomyelinase: 201-300/629.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: Converts sphingomyelin to ceramide. Also has phospholipase C activities toward 1,2-diacylglycerolphosphocholine and 1,2-diacylglycerolphosphoglycerol. Isoform 2 and isoform 3 have lost catalytic activity.
Involvement in disease: Defects in SMPD1 are the cause of Niemann-Pick disease type A (NPDA) ; also known as Niemann-Pick disease classical infantile form. It is an early-onset lysosomal storage disorder caused by failure to hydrolyze sphingomyelin to ceramide. It results in the accumulation of sphingomyelin and other metabolically related lipids in reticuloendothelial and other cell types throughout the body, leading to cell death. Niemann-Pick disease type A is a primarily neurodegenerative disorder characterized by onset within the first year of life, mental retardation, digestive disorders, failure to thrive, major hepatosplenomegaly, and severe neurologic symptoms. The severe neurological disorders and pulmonary infections lead to an early death, often around the age of four. Clinical features are variable. A phenotypic continuum exists between type A (basic neurovisceral) and type B (purely visceral) forms of Niemann-Pick disease, and the intermediate types encompass a cluster of variants combining clinical features of both types A and B.

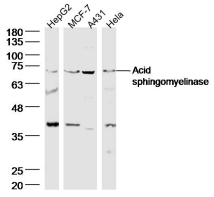
Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
Flow-Cyt (2ug/Test)

Reactivity: Human, Mouse, Rat (predicted: Rabbit, Pig, Cow, Dog)

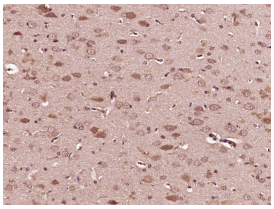
Predicted MW.: 64 kDa

Subcellular Location: Cytoplasm

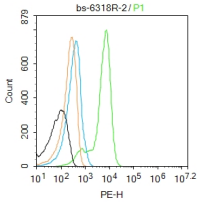
VALIDATION IMAGES



Sample: HepG2(human) cell Lysate at 30 ug MCF-7(human) cell Lysate at 30 ug A431(human) cell Lysate at 30 ug Hale(human) cell Lysate at 30 ug Primary: Anti- Acid sphingomyelinase (bs-6318R) at 1/300 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 64kD Observed band size: 69 kD



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Acid sphingomyelinase) Polyclonal Antibody, Unconjugated (bs-6318R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Blank control:A431. Primary Antibody (green line): Rabbit Anti-Acid sphingomyelinase antibody (bs-6318R) Dilution: 2µg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-PE Dilution: 1µg /test. Protocol The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 0.1% PBST for 20 min at room temperature.The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was

performed.

SELECTED CITATIONS

- **[IF=6.02]** Bodas M et al. Autophagy augmentation alleviates cigarette smoke-induced CFTR-dysfunction, ceramide-accumulation and COPD-emphysema pathogenesis.(2018) Free Radic Biol Med.131:81-97. FCM ;Human. 30500419
- **[IF=6.126]** Peñate T et al. Lipid-Iron Nanoparticle with a Cell Stress Release Mechanism Combined with a Local Alternating Magnetic Field Enables Site-Activated Drug ReleaseCancers (Basel).2020 Dec 14;12(12):3767. IHC ;Mouse. 33327621
- **[IF=6.081]** Tuula Penate Medina. et al. Utilizing Sphingomyelinase Sensitizing Liposomes in Imaging Intestinal Inflammation in Dextran Sulfate Sodium-Induced Murine Colitis. Biomedicines. 2022 Feb;10(2):413 IHC ;Human. 35203622
- **[IF=2.87]** Anastasia M. Ravodina. et al. Facile Cholesterol Loading with a New Probe ezFlux Allows for Streamlined Cholesterol Efflux Assays. Acs Omega. 2020;5(36):23289–23298 WB ;Mouse. 32954180