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Rabbit Anti-NSMase2/AP Conjugated antibody

SL11193R-AP

Product Name	Anti-NSMase2/AP
Chinese Name	碱性磷酸酶（AP）标记的中性鞘磷脂 2 抗体
Alias	N-SMase2; Cca1; neutral sphingomyelinase 2; Confluent 3Y1 cell-associated protein 1; Neutral sphingomyelinase 2; Neutral sphingomyelinase II; NSMA2_HUMAN; nSMase-2; nSMase2; Smpd3; Sphingomyelin phosphodiesterase 3.
Research Area	Cell biology Neurobiology Lipoprotein
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human,Mouse,Rat(predicted:Dog,Pig,Cow,Rabbit)
Applications	IHC-P=1:100-500,IHC-F=1:100-500,ELISA=1:500-5000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	71kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human NSMase2
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Product Detail	**background:** N-SMase2 (neutral sphingomyelinase 2), also known as NSMASE2 or SMPD3 (sphingomyelin phosphodiesterase 3), is a ubiquitously expressed 655 amino acid member of the magnesium-dependent phosphohydrolase protein

family. Localized to the membrane of the Golgi apparatus, N-SMase2 functions to catalyze the hydrolysis of sphingomyelin to form ceramide and phosphocholine—two proteins that mediate cell growth arrest and apoptosis. N-SMase2 is enzymatically activated by unsaturated fatty acids and phosphatidylserine and, through regulation of ceramide synthesis, is involved in growth suppression and postnatal development. Expression of N-SMase2 is upregulated during the G0/G1 phases of the cell cycle and optimal N-SMase2 activity occurs at a slightly basic pH of 7.5. N-SMase2 deficiency is the cause of chondrodysplasia, a genetic disorder characterized by impaired bone growth that leads to short stature, bowlegs and underdeveloped joints.

Function:
Catalyzes the hydrolysis of sphingomyelin to form ceramide and phosphocholine. Ceramide mediates numerous cellular functions, such as apoptosis and growth arrest, and is capable of regulating these 2 cellular events independently. Also hydrolyzes sphingosylphosphocholine. Regulates the cell cycle by acting as a growth suppressor in confluent cells. Probably acts as a regulator of postnatal development and participates in bone and dentin mineralization.

Subunit:
Belongs to the neutral sphingomyelinase family.

Subcellular Location:
Golgi apparatus membrane. Cell membrane. May localize to detergent-resistant subdomains of Golgi membranes of hypothalamic neurosecretory neurons. According to PubMed:15051724, it localizes to plasma membrane in confluent contact-inhibited cells.

Tissue Specificity:
Predominantly expressed in brain.

Similarity:
Belongs to the neutral sphingomyelinase family.

Database links:

Entrez Gene: 55512 Human

Omim: 605777 Human

SwissProt: Q9NY59 Human

Unigene: 368421 Human

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Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.