

Rabbit nSMase2 Polyclonal Antibody | anti-nSMase2 antibody

nSMase2 (C-terminal region) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA71714	Rabbit	Human, Rat, Mouse	Immunocytochemistry, ELISA, Western Blot

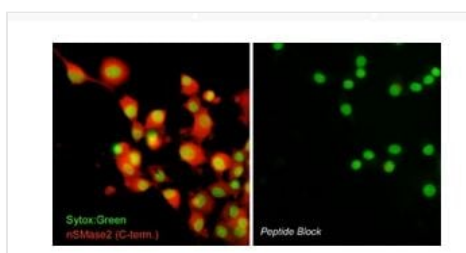
PRODUCT SYNONYMS

nSMase2; Polyclonal Antibody; nSMase2 (C-terminal region) Antibody; nSMase2 (C-terminal region); SMase2; anti-nSMase2 antibody

PRODUCT SPECIFICATIONS

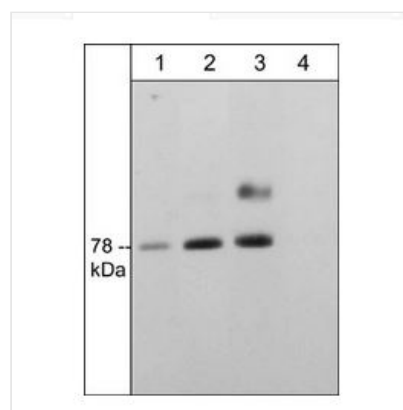
Host	Rabbit
Reactivity	Human, Rat, Mouse
Clonality	Polyclonal
Specificity	The antibody detects a 78kDa* band corresponding to nSMase2 on SDS-PAGE immunoblots of adult mouse brain and rat PC12 cells.
Form/Format	Rabbit polyclonal, affinity-purified antibody is supplied in 100ul phosphate-buffered saline, 50% glycerol, 1mg/ml BSA, and 0.05% sodium azide.
Applicable Applications for anti-nSMase2 antibody	ICC (Immunocytochemistry), ELISA, WB (Western Blot)
Immunogen	nSMase2 synthetic peptide corresponds to amino acids in the C-terminal region of human nSMase2. This sequence is highly conserved in rat and mouse nSMase2, and has low homology to other nSMase family members.
Preparation and Storage	Store at -20 degree C. Stable for 1 year.

IMAGES



ICC (Immunocytochemistry)

Immunocytochemical labeling of nSMase2 in aldehyde-fixed and NP-40-permeabilized differentiated PC12 cells. The cells were labeled with rabbit polyclonal anti-nSMase2 (SP4061) antibody in the absence (Left) or presence (Right) of blocking peptide (SX4065). The antibody was detected using appropriate secondary antibody conjugated to DyLight 594. The cells were counterstained with Sytox green to label nuclei.



WB (Western Blot)

Western blot of adult mouse brain. The blots were probed with anti-nSMase2 (C-terminal region) rabbit polyclonal antibody at 1:2000 (lane 1), 1:1000 (lane 2), or 1:500 in the absence (lane 3) or presence of nSMase2 blocking peptide (SX4065) (lane 4).

ADDITIONAL INFORMATION

Related Product Information for anti-nSMase2 antibody	Cellular stress leads to hydrolysis of sphingomyelin to generate lipid second messenger molecules including ceramide, sphingosine, and sphingosine-1-phosphate. A variety of sphingomyelinase activities have been described that differ in tissue and subcellular distribution, as well as pH and cation dependence. These enzymes generate ceramide for specific signaling pathways that lead to a wide range of cellular responses, such as apoptosis, cell cycle arrest, cell survival, and cell proliferation. Neutral sphingomyelinases (nSMases) are Mg ²⁺ -dependent neutral phospholipases, and the family includes nSMase1, nSMase2, and nSMase3. These nSMases differ in their tissue distribution and subcellular localization. nSMase2 (also known as SMPD3) is expressed primarily in brain, and co-localizes with Golgi markers in several cell lines. The activity and phosphorylation of nSMase2 is upregulated in response to oxidative stress. In addition, nSMase2 binds calcineurin, and this interaction inhibits nSMase2 activity.
References	Filosto, S. et al. (2010) J Biol Chem. 285(14):10213. Stoffel, W. et al. (2005) Proc Natl Acad Sci U S A. 102(12):4554. Hofmann, K. et al. (2000) Proc Natl Acad Sci U S A. 97(11):5895.

NCBI AND UNIPROT INFORMATION

NCBI GI #	8923946
NCBI GeneID	55512
NCBI Accession #	NP_061137.1
NCBI GenBank Nucleotide #	NM_018667.3
UniProt Accession #	Q9NY59; Q2M1S8
Molecular Weight	71 kDa
NCBI Official Full Name	sphingomyelin phosphodiesterase 3
NCBI Official Synonym Full Names	sphingomyelin phosphodiesterase 3, neutral membrane (neutral sphingomyelinase II)
NCBI Official Symbol	SMPD3
NCBI Official Synonym Symbols	NSMASE2
NCBI Protein Information	sphingomyelin phosphodiesterase 3; nSMase-2; neutral sphingomyelinase 2; neutral sphingomyelinase II
UniProt Protein Name	Sphingomyelin phosphodiesterase 3
UniProt Gene Name	SMPD3
UniProt Synonym Gene Names	nSMase-2; nSMase2
UniProt Entry Name	NSMA2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.