10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-nSMase3 (C-terminal region) Antibody

Catalog # AN1961

Product Information

Application	WB, ICC, IP
Primary Accession	Q6ZPR5
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	93276

Additional Information

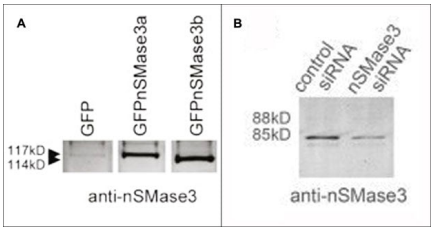
Gene ID	77626
Other Names	SMPD4, neutral sphingomyelinase 3, nSMase sphingomyelin
Dilution	WB~~1:1000 ICC~~N/A IP~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-nSMase3 (C-terminal region) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

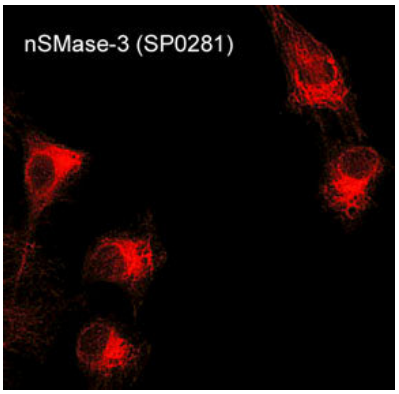
Cellular stress leads to hydrolysis of sphingomyelin to generate lipid second messenger molecules including ceramide, sphingosine, and sphingosine-1-phosphate. A variety of sphingomyelinase activities have been described that differ in tissue and subcellular distribution, as well as pH and cation dependence. 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 Mg2+-dependent neutral pH SMases, and the family includes nSMase1, nSMase2, and nSMase3. These nSMases differ in their tissue distribution and subcellular localization. nSMase3 (also known as SMPD4) is highly expressed in skeletal muscle and heart tissues, and is expressed in many cancer cell lines. The nSMase3 protein is localized to endoplasmic reticulum and Golgi, and may be upregulated in response to DNA damage and cell stress.

Images

Western blot of nSMase3a and nSMase3b GFP transfectants (A) and nSMase3 siRNA knockdown in C2C12 myotubes (B). Both blots were probed with anti-nSMase3 (C-terminal region) rabbit polyclonal antibody (AN1961). (Image provided by Dr. Jennifer



Moylan, Dept. Physiology, University of Kentucky).



Immunocytochemical labeling of nSMase3 in aldehyde-fixed and NP-40-permeabilized mouse C2C12 cells. The cells were labeled with rabbit polyclonal anti-nSMase3 (AN1961) antibody. The antibody was detected using appropriate secondary antibody conjugated to DyLight® 594.