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# Anti-nSMase2 (C-terminal region) Antibody

Catalog # AN1960

## Product Information

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| **Application** | WB, ICC |
| **Primary Accession** | Q9NY59 |
| **Host** | Rabbit |
| **Clonality** | Rabbit Polyclonal |
| **Isotype** | IgG |
| **Calculated MW** | 71081 |

## Additional Information

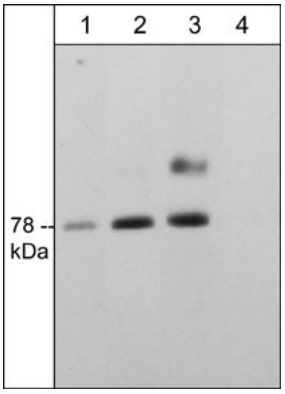
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|---|---|
| **Gene ID** | 55512 |
| **Other Names** | SMPD3, neutral sphingomyelinase 2, nSMase sphingomyelin |
| **Dilution** | WB~~1:1000 ICC~~N/A |
| **Storage** | Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | Anti-nSMase2 (C-terminal region) Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |
| **Shipping** | Blue Ice |

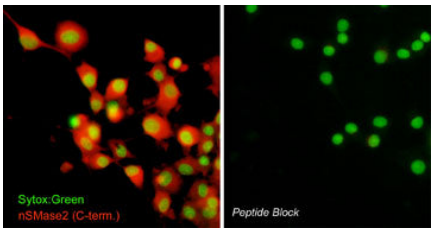
## Background

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 dependance. 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. 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.

## Images

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).




Immunocytochemical labeling of nSMase2 in aldehyde-fixed and NP-40-permeabilized differentiated PC12 cells. The cells were labeled with rabbit polyclonal anti-nSMase2 (AN1960) 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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.