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SMPD2

Reactivity: Human Mouse Rat

Tested applications:WB IHC

Recommended Dilution:WB 1:500 - 1:2000 IHC 1:50 - 1:200

Calculated MW:48kDa

Observed MW: Refer to Figures

Immunogen:

Recombinant protein of human SMPD2

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Synonym:

SMPD2;NSMASE;NSMASE1 ;

Catalog #:A1166

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID:6610

Isotype: IgG

Swiss Prot:O60906

Purity: Affinity purification

For research use only.

Background:

Sphingomyelinases (SMases) catalyze the hydrolysis of sphingomyelin to produce ceramide and phosphocholine (1). Ceramide is an important bioactive lipid triggering signal transduction involved in cell proliferation, apoptosis and differentiation (1,2). A number of SMases have been described and categorized based on their optimum pH activity, cation dependence, tissue distribution, and subcellular localization (1). These include a lysosomal acid SMase, a Zn++-dependent secreted acid SMase, a membrane-bound Mg++-dependent neutral SMase, a Mg++-independent neutral SMase, and an alkaline SMase.nSMase1 (also termed SMPD2) is a Mg++-dependent neutral SMase that is widely expressed and predominantly localized to the endoplasmic reticulum (3,4). This protein has also been shown to have lyso-platelet activating factor (PAF) phospholipase C activity (5). A second neutral SMase, nSMase2 (also termed SMPD3) is predominantly expressed in the brain (6). The activity of neutral SMases is regulated by oxidative stress, chemotherapeutic drugs, inflammatory cytokines, and apoptotic stimuli (1). Analysis of single and double knockouts of the SMPD2 and SMPD3 has revealed that loss of both genes leads to complete loss of neutral SMase activity with developmental defects observed with loss of nSMase2 (7,8).

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