

## 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<sup>++</sup>-dependent secreted acid SMase, a membrane-bound Mg<sup>++</sup>-dependent neutral SMase, a Mg<sup>++</sup>-independent neutral SMase, and an alkaline SMase.nSMase1 (also termed SMPD2) is a Mg<sup>++</sup>-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).

**To place an order, please [Click HERE](#).**