

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human SMPD3 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) SMPD1 or rhPP2A is observed.                                                                                                                                        |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2B</sub> Clone # 758612                                                                                                                                                                                                                           |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | <i>S. frugiperda</i> insect ovarian cell line Sf21-derived recombinant human SMPD3<br>Val2-Ala655<br>Accession # Q9NY59                                                                                                                                                     |
| <b>Conjugate</b>          | Alexa Fluor 405<br>Excitation Wavelength: 405 nm<br>Emission Wavelength: 421 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

SMPD3 (Sphingomyelin phosphodiesterase 3; also Neutral sphingomyelinase 2/nSMase2) is a 69-74 kDa member of the neutral sphingomyelinase family of enzymes. It is a monomeric Golgi/plasma membrane enzyme that converts sphingomyelin (a plasma membrane lipid) into ceramide and phosphorylcholine. This generates second messenger components that participate in signal transduction. Human SMPD3 is a two transmembrane, 655 amino acids molecule. It contains an N-terminal luminal segment (aa 1-10), a cytoplasmic region (aa 32-64), and one catalytic domain (aa 340-646). Phosphorylation increases its MW to 78 kDa in SDS-PAGE. There is one potential isoform that possesses an Asn substitution for aa 569-587. Over aa 2-655, human SMPD3 shares 91% aa sequence identity with mouse SMPD3.

## PRODUCT SPECIFIC NOTICES

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