

#### DESCRIPTION

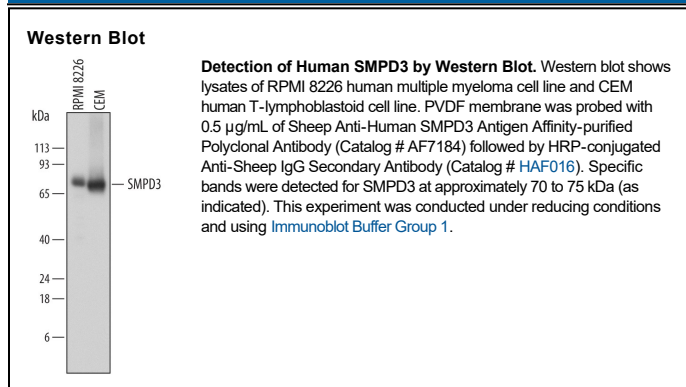
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human SMPD3 in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human SMPD3 Val2-Ala655 Accession # Q9NY59
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

#### 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.5 µg/mL	See Below

#### DATA



#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### 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.