

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human SMPD1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human SMPD3 and recombinant mouse SMPD1 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 563418
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human SMPD1 isoform 1 His62-Pro628 Accession # NP_000534
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Neutralization	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

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

BACKGROUND

Sphingomyelin phosphodiesterase, also known as acid sphingomyelinase and encoded by the SMPD1 gene, is a lysosomal phosphodiesterase which belongs to the acid sphingomyelinase family (1). SMPD1 catalyzes the hydrolysis of sphingomyelin to ceramide and phosphorylcholine. Ceramide, a bioactive lipid, has emerged as an important signaling molecule involved in a variety of cellular processes such as cell differentiation, apoptosis, and proliferation (2). Activation of SMPD1 occurs by the removal, chemical modification or dimerization of its C-terminal cysteine residue (3). Deficiencies of SMPD1 result in a lysosomal storage disorder referred to as Niemann-Pick disease (4). rhSMPD1 was expressed without the last three C-terminal residues, and is therefore constitutively active.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.