SMPD2 Conjugated Antibody

Catalog No: #C38208

Package Size: #C38208-AF350 100ul #C38208-AF405 100ul #C38208-AF488 100ul #C38208-AF555 100ul #C38208-AF594 100ul #C38208-AF647 100ul #C38208-AF680 100ul #C38208-AF750 100ul #C38208-Biotin 100ul

Orders: order@signalwayantibody.com
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Description

Product Name	SMPD2 Conjugated Antibody
Host Species	Rabbit
Clonality	Polyclonal
Species Reactivity	Hu Ms Rt
Specificity	The antibody detects endogenous level of total SMPD2 antibody.
Immunogen Description	Recombinant protein of human SMPD2.
Conjugates	Biotin AF350 AF405 AF488 AF555 AF594 AF647 AF680 AF750
Other Names	SMPD2;NSMASE;NSMASE1 ;
Accession No.	Swiss-Prot#:O60906NCBI Gene ID:6610
Uniprot	O60906
GeneID	6610;
Excitation Emission	AF350: 346nm/442nm AF405: 401nm/421nm AF488: 493nm/519nm AF555: 555nm/565nm AF594: 591nm/614nm AF647: 651nm/667nm AF680: 679nm/702nm AF750: 749nm/775nm
Calculated MW	48
Formulation	0.01M Sodium Phosphate, 0.25M NaCl, pH 7.6, 5mg/ml Bovine Serum Albumin, 0.02% Sodium Azide
Storage	Store at 4°C in dark for 6 months

Application Details

Suggested Dilution:

AF350 conjugated: most applications: 1: 50 - 1: 250

AF405 conjugated: most applications: 1: 50 - 1: 250

AF488 conjugated: most applications: 1: 50 - 1: 250

AF555 conjugated: most applications: 1: 50 - 1: 250

AF594 conjugated: most applications: 1: 50 - 1: 250

AF647 conjugated: most applications: 1: 50 - 1: 250

AF680 conjugated: most applications: 1: 50 - 1: 250

AF750 conjugated: most applications: 1: 50 - 1: 250

Biotin conjugated: working with enzyme-conjugated streptavidin, most applications: 1: 50 - 1: 1,000

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).

Note: This product is for in vitro research use only