10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SUMF1 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54839

Specification

SUMF1 Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IHC-F, IF, ICC, E**
Primary Accession	Q8NBK3
Reactivity	**Rat, Pig, Dog, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**37 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human SUMF1**
Epitope Specificity	**301-374/374**
Isotype	**IgG**
Purity	
affinity purified by Protein A	
Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Endoplasmic reticulum lumen.**
SIMILARITY	**Belongs to the sulfatase-modifying factor family.**
SUBUNIT	**Monomer, homodimer and heterodimer with SUMF2.**
Post-translational modifications	**N-glycosylated. Contains high-mannose-type oligosaccharides.**
DISEASE	**Defects in SUMF1 are the cause of multiple sulfatase deficiency (MSD) [MIM:272200]. MSD is a clinically and biochemically heterogeneous disorder caused by the simultaneous impairment of all sulfatases, due to defective post-translational modification and activation. It combines features of individual sulfatase deficiencies such as metachromatic leukodystrophy, mucopolysaccharidosis, chondrodysplasia punctata, hydrocephalus, ichthyosis, neurologic deterioration and developmental delay. Inheritance is autosomal recessive.**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
SUMF1 is a 374 amino acid alternatively spliced protein that localizes to the lumen of the endoplasmic reticulum and belongs to the sulfatase-modifying factor family. Expressed ubiquitously with highest expression in liver, kidney and pancreas, SUMF1 exists as either a monomer, a homodimer or a heterodimer (with SUMF2) and functions to oxidize sulfatase cysteine

residues to an active FGly residue, thereby playing an important role in sulfatase activity. Defects in the gene encoding SUMF1 are the cause of multiple sulfatase deficiency (MSD), a heterogeneous disorder characterized by metachromatic leukodystrophy, mucopolysaccharidosis, chondrodysplasia punctata, hydrocephalus, ichthyosis, neurologic deterioration and developmental delay.

SUMF1 Polyclonal Antibody - Additional Information

Gene ID 285362

Other Names
Formylglycine-generating enzyme, FGE, 1.8.3.7, C-alpha-formylglycine-generating enzyme 1, Sulfatase-modifying factor 1, SUMF1 {ECO:0000303|PubMed:12757706, ECO:0000312|HGNC:HGNC:20376}

Target/Specificity
Ubiquitous. Highly expressed in kidney, pancreas and liver. Detected at lower levels in leukocytes, lung, placenta, small intestine, skeletal muscle and heart.

Dilution
WB~~1:1000<br \>IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A<br \>E~~N/A

Format
0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

SUMF1 Polyclonal Antibody - Protein Information

Name SUMF1 {ECO:0000303|PubMed:12757706, ECO:0000312|HGNC:HGNC:20376}

Function
Oxidase that catalyzes the conversion of cysteine to 3- oxoalanine on target proteins, using molecular oxygen and an unidentified reducing agent (PubMed:12757706, PubMed:15657036, PubMed:15907468, PubMed:16368756, PubMed:21224894, PubMed:25931126). 3-oxoalanine modification, which is also named formylglycine (fGly), occurs in the maturation of arylsulfatases and some alkaline phosphatases that use the hydrated form of 3-oxoalanine as a catalytic nucleophile (PubMed:12757706, PubMed:15657036, PubMed:15907468, PubMed:16368756, PubMed:<a href="http://www.uniprot.org/citations/25931126"

target="_blank">25931126). Known substrates include GALNS, ARSA, STS and ARSE (PubMed:12757706, PubMed:15657036, PubMed:15907468).

Cellular Location
Endoplasmic reticulum lumen

Tissue Location
Ubiquitous. Highly expressed in kidney, pancreas and liver. Detected at lower levels in leukocytes, lung, placenta, small intestine, skeletal muscle and heart

SUMF1 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SUMF1 Polyclonal Antibody - Images