

SGPP1 Antibody (N-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13228a

Specification

SGPP1 Antibody (N-term) - Product Information

Application	IHC-P-Leica, WB,E
Primary Accession	O9BX95
Other Accession	NP_110418.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	49108
Antigen Region	13-42

SGPP1 Antibody (N-term) - Additional Information

Gene ID 81537

Other Names

Sphingosine-1-phosphate phosphatase 1, SPPase1, Spp1, hSPP1, hSPPase1, 313-, Sphingosine-1-phosphatase 1, SGPP1

Target/Specificity

This SGPP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 13-42 amino acids from the N-terminal region of human SGPP1.

Dilution

IHC-P-Leica~~1:500

WB~~1:1000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

SGPP1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

SGPP1 Antibody (N-term) - Protein Information

Name SGPP1 ([HGNC:17720](#))

Function Specifically dephosphorylates sphingosine 1-phosphate (S1P), dihydro-S1P, and phyto-S1P. Does not act on ceramide 1-phosphate, lysophosphatidic acid or phosphatidic acid (PubMed:[16782891](#)). Sphingosine-1-phosphate phosphatase activity is needed for efficient recycling of sphingosine into the sphingolipid synthesis pathway (PubMed:[11756451](#), PubMed:[12815058](#), PubMed:[16782891](#)). Regulates the intracellular levels of the bioactive sphingolipid metabolite S1P that regulates diverse biological processes acting both as an extracellular receptor ligand or as an intracellular second messenger (PubMed:[11756451](#), PubMed:[12815058](#), PubMed:[16782891](#)). Involved in efficient ceramide synthesis from exogenous sphingoid bases. Converts S1P to sphingosine, which is readily metabolized to ceramide via ceramide synthase. In concert with sphingosine kinase 2 (SphK2), recycles sphingosine into ceramide through a phosphorylation/dephosphorylation cycle (By similarity). Regulates endoplasmic-to-Golgi trafficking of ceramides, resulting in the regulation of ceramide levels in the endoplasmic reticulum, preferentially long-chain ceramide species, and influences the anterograde membrane transport of both ceramide and proteins from the endoplasmic reticulum to the Golgi apparatus (PubMed:[16782891](#)). The modulation of intracellular ceramide levels in turn regulates apoptosis (By similarity). Via S1P levels, modulates resting tone, intracellular Ca(2+) and myogenic vasoconstriction in resistance arteries (PubMed:[18583713](#)). Also involved in unfolded protein response (UPR) and ER stress-induced autophagy via regulation of intracellular S1P levels (PubMed:[18583713](#), PubMed:[20798685](#)). Involved in the regulation of epidermal homeostasis and keratinocyte differentiation (By similarity).

Cellular Location

Endoplasmic reticulum membrane; Multi-pass membrane protein. Cell membrane {ECO:0000250|UniProtKB:Q9JI99}; Multi-pass membrane protein

Tissue Location

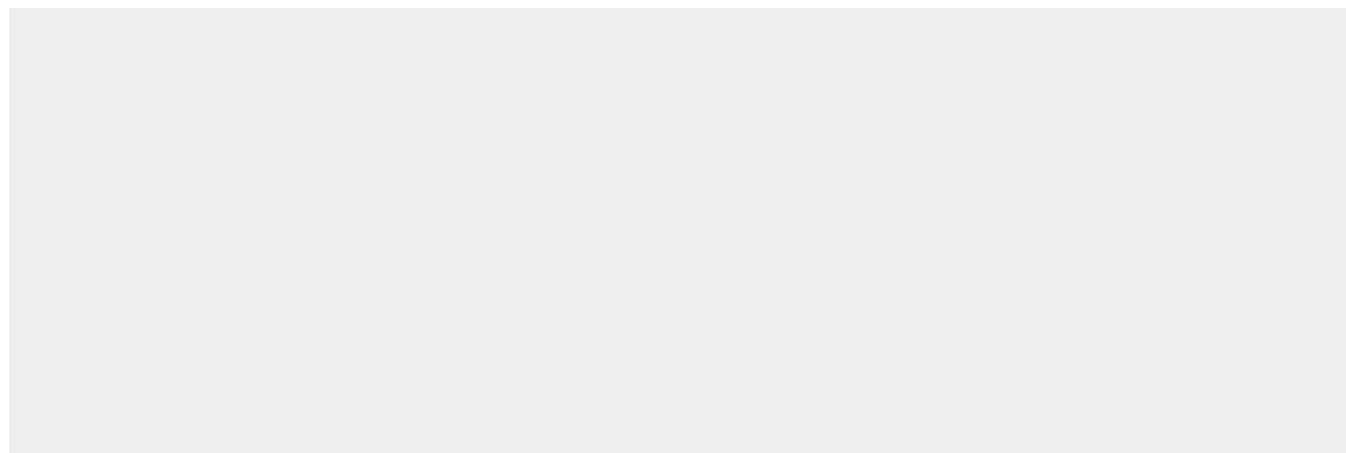
Ubiquitous, with the strongest level in placenta and kidney.

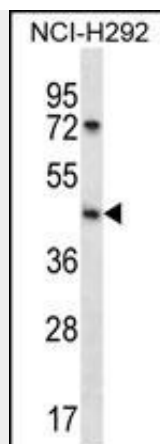
SGPP1 Antibody (N-term) - Protocols

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

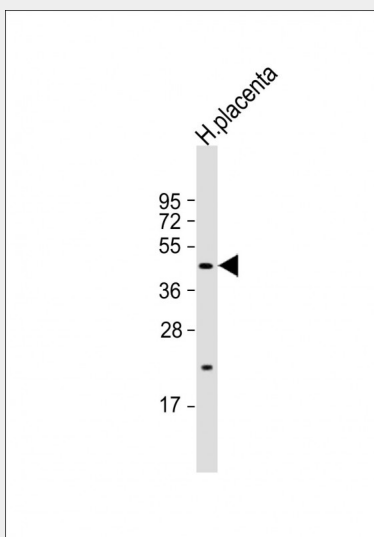
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SGPP1 Antibody (N-term) - Images

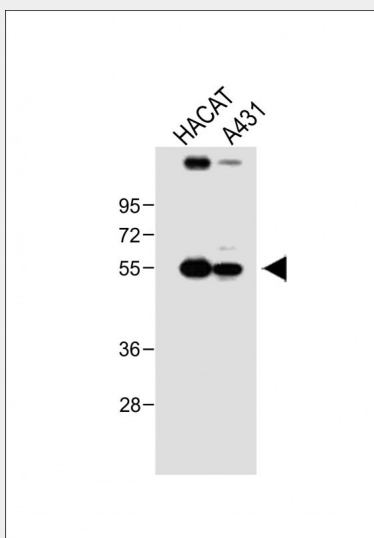




SGPP1 Antibody (N-term) (Cat. #AP13228a) western blot analysis in NCI-H292 cell line lysates (35ug/lane). This demonstrates the SGPP1 antibody detected the SGPP1 protein (arrow).

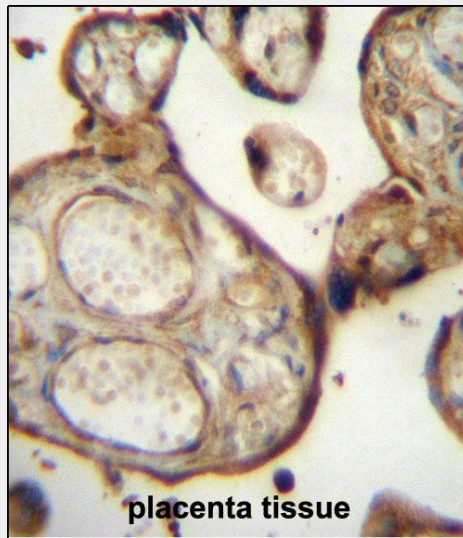


Anti-SGPP1 Antibody (N-term) at 1:1000 dilution + human placenta lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 49 kDa Blocking/Dilution buffer: 5% NFDm/TBST.

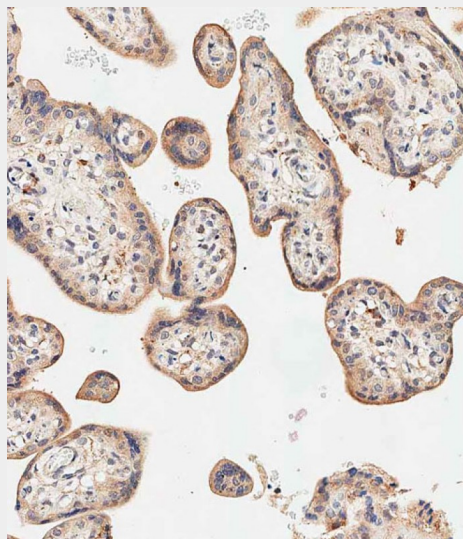


All lanes : Anti-SGPP1 Antibody (N-term) at 1:1000 dilution Lane 1: HACAT whole cell lysate Lane

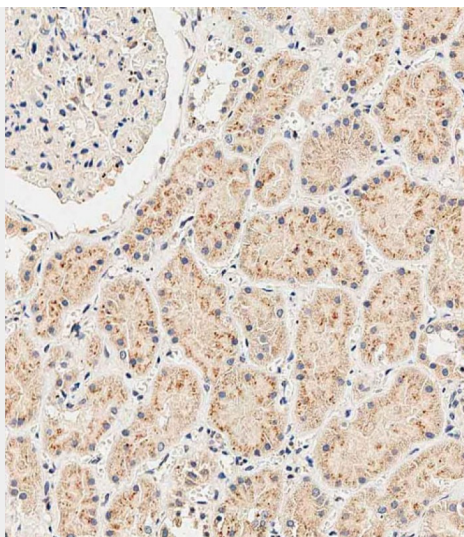
2: A431 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 49 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



SGPP1 Antibody (N-term) (Cat. #AP13228a) immunohistochemistry analysis in formalin fixed and paraffin embedded human placenta tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of SGPP1 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



Immunohistochemical analysis of paraffin-embedded human placenta tissue using AP13228A performed on the Leica® BOND RXm. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH9.0). Samples were incubated with primary antibody (1:500) for 1 hour at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.



Immunohistochemical analysis of paraffin-embedded human kidney tissue using AP13228A performed on the Leica® BOND RXm. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:500) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.

SGPP1 Antibody (N-term) - Background

Sphingosine-1-phosphate (S1P) is a bioactive sphingolipid metabolite that regulates diverse biologic processes. SGPP1 catalyzes the degradation of S1P via salvage and recycling of sphingosine into long-chain ceramides (Mandala et al., 2000 [PubMed 10859351]; Le Stunff et al., 2007 [PubMed 17895250]).[supplied by OMIM].

SGPP1 Antibody (N-term) - References

Hicks, A.A., et al. PLoS Genet. 5 (10), E1000672 (2009) :
Le Stunff, H., et al. J. Biol. Chem. 282(47):34372-34380(2007)
Sugiyama, N., et al. Mol. Cell Proteomics 6(6):1103-1109(2007)
Olsen, J.V., et al. Cell 127(3):635-648(2006)
Giussani, P., et al. Mol. Cell. Biol. 26(13):5055-5069(2006)