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SIP1 Antibody (C-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS13956

Specification

SIP1 Antibody (C-Terminus) - Product Information

Application	**ICC, IF, WB, IHC**
Primary Accession	O14893
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**32kDa KDa**

SIP1 Antibody (C-Terminus) - Additional Information

Gene ID 8487

Other Names
Gem-associated protein 2, Gemin-2, Component of gems 2, Survival of motor neuron protein-interacting protein 1, SMN-interacting protein 1, GEMIN2, SIP1

Target/Specificity
Human SIP1

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions
SIP1 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

SIP1 Antibody (C-Terminus) - Protein Information

Name GEMIN2 (HGNC:10884)

Synonyms SIP1

Function
The SMN complex catalyzes the assembly of small nuclear ribonucleoproteins (snRNPs), the building blocks of the spliceosome, and thereby plays an important role in the splicing of cellular pre- mRNAs (PubMed:18984161, PubMed:9323129). Most spliceosomal snRNPs contain a common set of Sm proteins SNRPB, SNRPD1, SNRPD2, SNRPD3, SNRPE, SNRPF and SNRPG that assemble in a heptameric protein ring on the Sm site of the small nuclear RNA to form the core snRNP (Sm core) (PubMed:18984161). In the cytosol, the Sm proteins SNRPD1, SNRPD2, SNRPE, SNRPF and SNRPG (5Sm) are trapped in an inactive 6S pICln-Sm complex by the chaperone CLNS1A that controls the assembly of the core

snRNP (PubMed:18984161). To assemble core snRNPs, the SMN complex accepts the trapped 5Sm proteins from CLNS1A (PubMed:18984161, PubMed:9323129). Binding of snRNA inside 5Sm ultimately triggers eviction of the SMN complex, thereby allowing binding of SNRPD3 and SNRPB to complete assembly of the core snRNP (PubMed:31799625). Within the SMN complex, GEMIN2 constrains the conformation of 5Sm, thereby promoting 5Sm binding to snRNA containing the snRNP code (a nonameric Sm site and a 3'-adjacent stem-loop), thus preventing progression of assembly until a cognate substrate is bound (PubMed:31799625, PubMed:21816274, PubMed:16314521).

Cellular Location
Nucleus, gem. Cytoplasm. Note=Localized in subnuclear structures next to coiled bodies, called gems, which are highly enriched in spliceosomal snRNPs. Also found in the cytoplasm

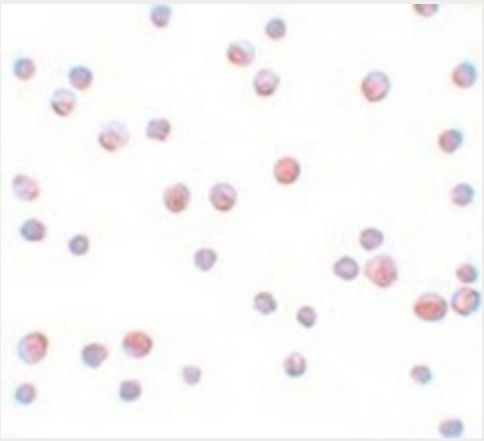
Volume
250 µl

SIP1 Antibody (C-Terminus) - 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

SIP1 Antibody (C-Terminus) - Images



Immunocytochemistry of SIP1 in HeLa cells with SIP1 antibody at 4 ug/ml.

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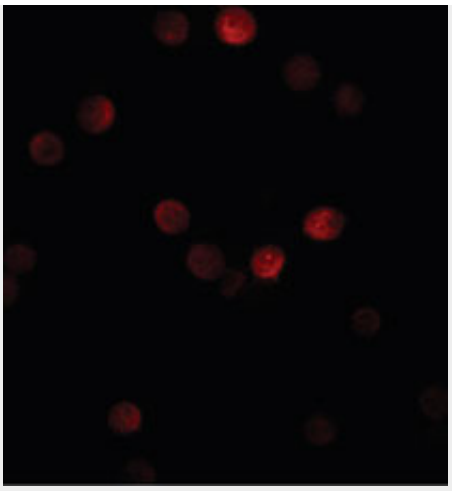
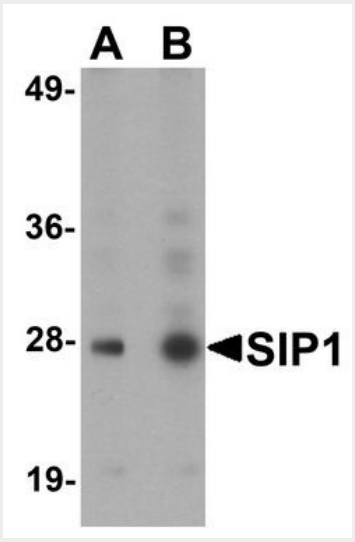
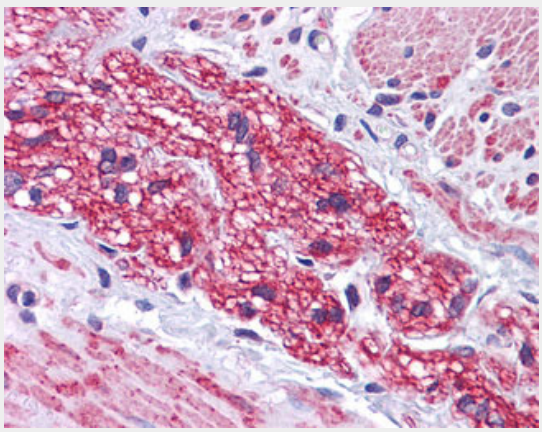


Immunofluorescence of SIP1 in HeLa cells with SIP1 antibody at 20 ug/ml.



Western blot analysis of SIP1 in HeLa cell lysate with SIP1 antibody at (A) 0.5 and (B) 1ug/ml.



Anti-SIP1 antibody IHC of human colon, nerve.

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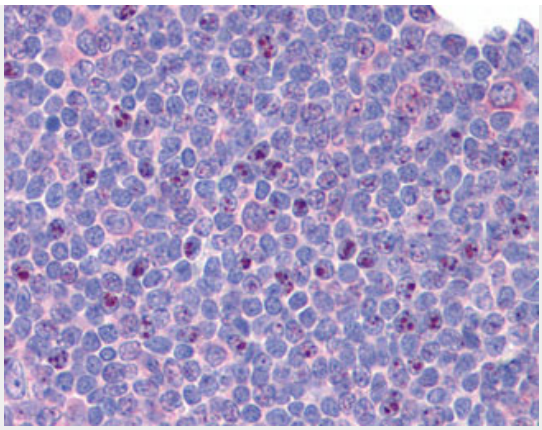

Anti-SIP1 antibody IHC of human tonsil.

SIP1 Antibody (C-Terminus) - Background

The SMN complex plays a catalyst role in the assembly of small nuclear ribonucleoproteins (snRNPs), the building blocks of the spliceosome. Thereby, plays an important role in the splicing of cellular pre-mRNAs. Most spliceosomal snRNPs contain a common set of Sm proteins SNRPB, SNRPD1, SNRPD2, SNRPD3, SNRPE, SNRPF and SNRPG that assemble in a heptameric protein ring on the Sm site of the small nuclear RNA to form the core snRNP. In the cytosol, the Sm proteins SNRPD1, SNRPD2, SNRPE, SNRPF and SNRPG are trapped in an inactive 6S pICln-Sm complex by the chaperone CLNS1A that controls the assembly of the core snRNP. Dissociation by the SMN complex of CLNS1A from the trapped Sm proteins and their transfer to an SMN-Sm complex triggers the assembly of core snRNPs and their transport to the nucleus.

SIP1 Antibody (C-Terminus) - References

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