

SIP1 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5318

Specification

SIP1 Antibody (C-term) - Product Information

Application	WB,E
Primary Accession	O14893
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	polyclonal
Calculated MW	H=32,30;M=30;Rat=30 KDa
Isotype	Rabbit IgG
Antigen Source	HUMAN

SIP1 Antibody (C-term) - Additional Information

Gene ID 8487

Antigen Region
244-277

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

Dilution

WB~~1:1000

Target/Specificity

This SIP1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 244-277 amino acids from the C-terminal region of human SIP1.

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

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

SIP1 Antibody (C-term) - 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](http://www.uniprot.org/citations/18984161)), PubMed:[9323129](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/18984161)). To assemble core snRNPs, the SMN complex accepts the trapped 5Sm proteins from CLNS1A (PubMed:[18984161](http://www.uniprot.org/citations/18984161)), PubMed:[9323129](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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:[16314521](http://www.uniprot.org/citations/16314521)), PubMed:[21816274](http://www.uniprot.org/citations/21816274)), PubMed:[31799625](http://www.uniprot.org/citations/31799625)).

Cellular Location

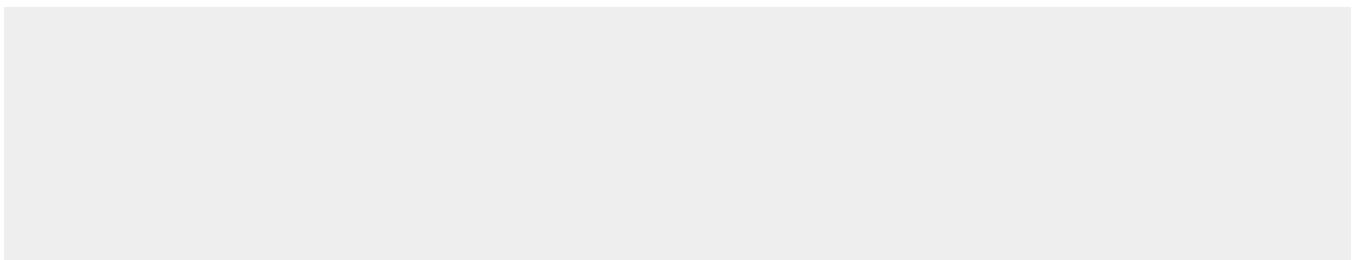
Nucleus, gem. Cytoplasm. Note=Localized in subnuclear structures next to coiled bodies, called gems, which are highly enriched in spliceosomal snRNPs. Also found in the cytoplasm

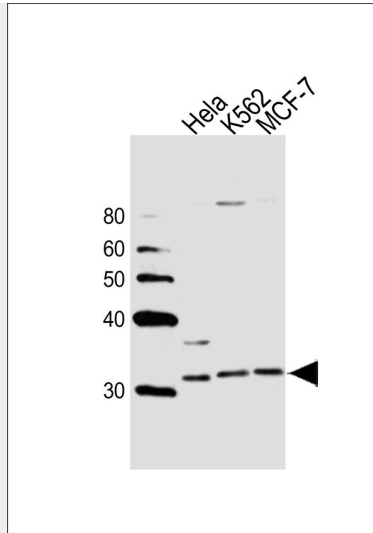
SIP1 Antibody (C-term) - Protocols

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](#)

SIP1 Antibody (C-term) - Images





Western blot analysis of lysates from HeLa, K562, MCF-7 cell line (from left to right), using SIP1 Antibody (C-term) (Cat. #AW5318). AW5318 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L (HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.

SIP1 Antibody (C-term) - 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-term) - References

- Liu Q., et al. *Cell* 90:1013-1021(1997).
- Aerbajinai W., et al. *Int. J. Biochem. Cell Biol.* 34:699-707(2002).
- Helmken C., et al. *Eur. J. Hum. Genet.* 8:493-499(2000).
- Ota T., et al. *Nat. Genet.* 36:40-45(2004).
- Gubitz A.K., et al. *J. Biol. Chem.* 277:5631-5636(2002).