Technical Data Sheet

Purified Mouse Anti-Human SIP1

Product Information

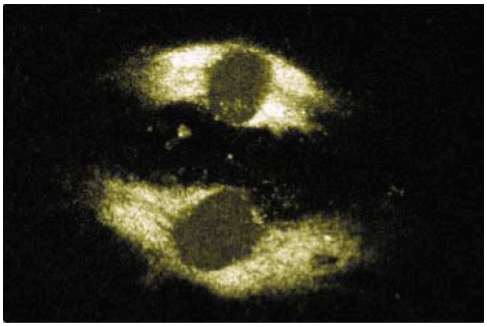
Material Number:	**611256**
Alternate Name:	SMN-Interacting Protein 1
Size:	50 µg
Concentration:	250 µg/ml
Clone:	4/SIP1
Immunogen:	Human SIP1 aa. 36-156
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	32 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Spinal muscular atrophy (SMA), a commonly fatal autosomal recessive disease, is caused by the degeneration of spinal anterior horn cells. It leads to symmetrical limb and trunk paralysis and muscular atrophy. SMA has been linked to the protein product of the *Survival of Motor Neurons (SMN)* gene. In greater than 98% of all SMA patients, *SMN* has been reported to be deleted or mutated. Although its function is unknown, the SMN protein is highly concentrated in novel nuclear structures, termed gems. SIP1 (**S**MN-**i**nteracting **p**rotein **1**) forms a stable heteromeric complex with SMN and colocalizes with SMN in gems and in the cytoplasm. In SMA, the expression of both proteins is dramatically reduced in motor neurons. Additionally, SMN and SIP1 have been isolated from a 300 kDa protein complex that also contains spliceosomal snRNP proteins. In particular, the SMN-SIP1 complex associates with the spliceosomal snRNAs U1 and U5. Antibodies against the SMN-SIP1 complex interfere with the assembly and nuclear importation of spliceosomal complexes. Thus, it is thought that the SMN-SIP1 complex mediates the formation of spliceosomal snRNPs. However, the exact role of SIP1 in rRNA processing has yet to be determined.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Western blot analysis of SIP1 on a K562 cell lysate.
Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the anti- human SIP1 antibody.



Immunofluorescence staining of human intestinal smooth muscle (HISM) cells.

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Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
611550	K-562 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Fischer U, Liu Q, Dreyfuss G. The SMN-SIP1 complex has an essential role in spliceosomal snRNP biogenesis. *Cell.* 1997; 90(6):1023-1029.(Biology)
Liu Q, Fischer U, Wang F, Dreyfuss G. The spinal muscular atrophy disease gene product, SMN, and its associated protein SIP1 are in a complex with spliceosomal snRNP proteins. *Cell.* 1997; 90(6):1013-1021.(Biology)