

Gemin4 (C-18): sc-21437

BACKGROUND

Gemin4 is a component of the SMN core complex which, while in the cytoplasm, plays an essential role in ribonucleoprotein (snRNP) assembly, including the biogenesis, delivery and recycling of snRNPs to the spliceosome. In the nucleus, where SMN is required for pre-mRNA splicing, Gemin4 concentrates next to coiled bodies in subnuclear structures called gems, that are highly enriched in spliceosomal snRNPs, and in the nucleolus. Deletion or loss-of-function mutations in the SMN lead to the neurodegenerative disease spinal muscular atrophy (SMA). The human Gemin4 maps to chromosome 17p13.3.

REFERENCES

1. Charroux, B., et al. 2000. Gemin4. A novel component of the SMN complex that is found in both gems and nucleoli. *J. Cell Biol.* 148: 1177-1186.
2. Park, J.W., et al. 2001. Association of galectin-1 and galectin-3 with Gemin4 in complexes containing the SMN protein. *Nucleic Acids Res.* 29: 3595-3602.
3. Mourelatos, Z., et al. 2001. SMN interacts with a novel family of hnRNP and spliceosomal proteins. *EMBO J.* 20: 5443-5452.
4. Di, L., et al. 2003. HCC-associated protein HCAP1, a variant of Gemin4, interacts with zinc-finger proteins. *J. Biochem.* 133: 713-718.
5. Patterson, R.J., et al. 2004. Understanding the biochemical activities of galectin-1 and galectin-3 in the nucleus. *Glycoconj. J.* 19: 499-506.
6. Wang, J.L., et al. 2004. Nucleocytoplasmic lectins. *Biochim. Biophys. Acta* 1673: 75-93.
7. SWISS-PROT/TrEMBL (P57678). World Wide Web URL: <http://www.expasy.ch/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: GEMIN4 (human) mapping to 17p13.3; Gemin4 (mouse) mapping to 11 B5.

SOURCE

Gemin4 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Gemin 4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21437 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Gemin4 (C-18) is recommended for detection of Gemin4 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

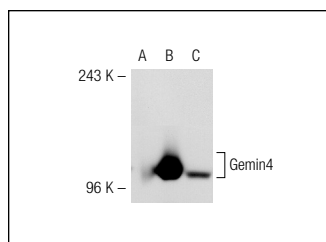
Gemin4 (C-18) is also recommended for detection of Gemin4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Gemin4 siRNA (h): sc-43799, Gemin4 siRNA (m): sc-44827, Gemin4 shRNA Plasmid (h): sc-43799-SH, Gemin4 shRNA Plasmid (m): sc-44827-SH, Gemin4 shRNA (h) Lentiviral Particles: sc-43799-V and Gemin4 shRNA (m) Lentiviral Particles: sc-44827-V.

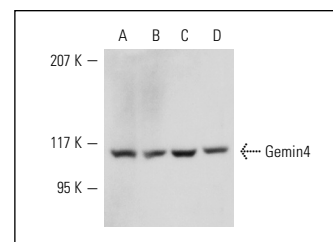
Molecular Weight of Gemin4: 120 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, Hep G2 cell lysate: sc-2227 or A549 cell lysate: sc-2413.

DATA



Gemin4 (C-18): sc-21437. Western blot analysis of Gemin4 expression in non-transfected 293T: sc-117752 (A), mouse Gemin4 transfected 293T: sc-125378 (B) and Hep G2 (C) whole cell lysates.



Gemin4 (C-18): sc-21437. Western blot analysis of Gemin4 expression in Hep G2 (A), A549 (B), SK-N-SH (C) and PC-3 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lorson, M.A., et al. 2008. Identification and characterisation of a nuclear localisation signal in the SMN associated protein, Gemin4. *Biochem. Biophys. Res. Commun.* 375: 33-37.
2. Todd, A.G., et al. 2010. Analysis of SMN-neurite granules: Core Cajal body components are absent from SMN-cytoplasmic complexes. *Biochem. Biophys. Res. Commun.* 397: 479-485.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS
Satisfaction
Guaranteed

Try **Gemin4 (E-8): sc-365424** or **Gemin4 (A-11): sc-166017**, our highly recommended monoclonal alternatives to Gemin4 (C-18).