

Gemin7 (V-17): sc-67498



The Power to Question

BACKGROUND

Gemin7 is a 131 amino acid protein encoded by the human gene GEMIN7. Gemin7, along with Gemin6, is a significant component of the the large multi-protein human SMN complex. The SMN complex functions as an assembly machine for small nuclear ribonucleoproteins (snRNPs)-the major components of the spliceosome. The survival of motor neurons (SMN) protein, a product of the disease gene of the common neurodegenerative disease, spinal muscular atrophy, is also part of the SMN complex. Although Gemin6 and Gemin7 have no significant sequence similarity with Sm proteins, both adopt canonical Sm folds. Moreover, Gemin6 and Gemin7 exist as a heterodimer and interact with each other via an interface similar to that which mediates interactions among the Sm proteins. The Gemin6/Gemin7 complex binds to Sm proteins and might help organize Sm proteins for formation of Sm rings on snRNA targets.

REFERENCES

1. Lesage, P., Yang, X. and Carlson, M. 1994. Analysis of the SIP3 protein identified in a two-hybrid screen for interaction with the SNF1 protein kinase. *Nucleic Acids Res.* 22: 597-603.
2. Baccon, J., Pellizzoni, L., Rappsilber, J., Mann, M. and Dreyfuss, G. 2002. Identification and characterization of Gemin7, a novel component of the survival of motor neuron complex. *J. Biol. Chem.* 277: 31957-31962.
3. Ma, Y., Dostie, J., Dreyfuss, G. and Van Duyne, G.D. 2005. The Gemin6-Gemin7 heterodimer from the survival of motor neurons complex has an Sm protein-like structure. *Structure* 13: 883-892.
4. Leung, A.K. and Nagai, K. 2005. Gemin 6 and 7 lend a hand to snRNP assembly. *Structure* 13: 833-834.
5. Shpargel, K.B. and Matera, A.G. 2005. Gemin proteins are required for efficient assembly of Sm-class ribonucleoproteins. *Proc. Natl. Acad. Sci. USA* 102: 17372-17377.

CHROMOSOMAL LOCATION

Genetic locus: Gemin7 (mouse) mapping to 7 A3.

SOURCE

Gemin7 (V-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Gemin7 of mouse 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-67498 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.

APPLICATIONS

Gemin7 (V-17) is recommended for detection of Gemin7 of 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).

Suitable for use as control antibody for Gemin7 siRNA (m): sc-62371, Gemin7 shRNA Plasmid (m): sc-62371-SH and Gemin7 shRNA (m) Lentiviral Particles: sc-62371-V. Molecular Weight of Gemin7: 15 kDa.

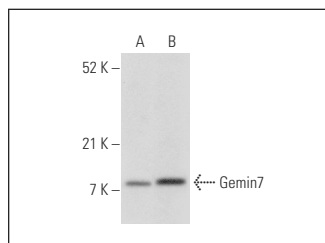
Molecular Weight of Gemin7: 15 kDa.

Positive Controls: CSMLO whole cell lysate: sc-364369 or RAW 264.7 whole cell lysate: sc-2211.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Gemin7 (V-17): sc-67498. Western blot analysis of Gemin7 expression in RAW 264.7 (A) and CSMLO (B) whole cell lysates.

RESEARCH USE

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



Try **Gemin7 (H-9): sc-514950**, our highly recommended monoclonal alternative to Gemin7 (V-17).