

Spartin (H-141): sc-98961

BACKGROUND

Spartin is a protein that may be involved in microtubule dynamics and endosomal trafficking. The Spartin protein contains a microtubule interacting and trafficking (MIT) molecule domain and is ubiquitously expressed, with highest levels observed in adipose tissue. A frameshift mutation in the Spartin gene (SPG20) causes spastic paraplegia 20, also designated Troyer syndrome, an autosomal recessive form of hereditary spastic paraplegia (HSP). HSP is an inherited neurological disorder characterized by lower extremity weakness and stiffness due to a length-dependent, retrograde axonopathy of corticospinal motor neurons.

REFERENCES

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2. Neuhäuser, G., et al. 1976. Familial spastic paraplegia with distal muscle wasting in the Old Order Amish; atypical Troyer syndrome or new syndrome. *Clin. Genet.* 9: 315-323.
3. Patel, H., et al. 2002. SPG20 is mutated in Troyer syndrome, an hereditary spastic paraplegia. *Nat. Genet.* 31: 347-348.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 275900. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Ciccarelli, F.D., et al. 2003. The identification of a conserved domain in both Spartin and Spastin, mutated in hereditary spastic paraplegia. *Genomics* 81: 437-441.
6. Proukakis, C., et al. 2004. Troyer syndrome revisited. A clinical and radiological study of a complicated hereditary spastic paraplegia. *J. Neurol.* 251: 1105-1110.
7. Bakowska, J.C., et al. 2005. The Troyer syndrome (SPG20) protein Spartin interacts with Eps15. *Biochem. Biophys. Res. Commun.* 334: 1042-1048.
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CHROMOSOMAL LOCATION

Genetic locus: SPG20 (human) mapping to 13q13.3; Spg20 (mouse) mapping to 3 C.

SOURCE

Spartin (H-141) is a rabbit polyclonal antibody raised against amino acids 1-141 mapping at the N-terminus of Spartin 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.

APPLICATIONS

Spartin (H-141) is recommended for detection of Spartin of mouse, rat and human 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).

Spartin (H-141) is also recommended for detection of Spartin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Spartin siRNA (h): sc-61601, Spartin siRNA (m): sc-61602, Spartin shRNA Plasmid (h): sc-61601-SH, Spartin shRNA Plasmid (m): sc-61602-SH, Spartin shRNA (h) Lentiviral Particles: sc-61601-V and Spartin shRNA (m) Lentiviral Particles: sc-61602-V.

Molecular Weight of Spartin: 73 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Cobanoglu, G., et al. 2012. Are alsin and spartin novel interaction partners? *Biochem. Biophys. Res. Commun.* 427: 1-4.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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



Try **Spartin (D-4): sc-271888**, our highly recommended monoclonal alternative to Spartin (H-141).