

# Spartin (D-4): sc-271888

## 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

1. Cross, H.E. and McKusick, V.A. 1967. The Troyer syndrome. A recessive form of spastic paraplegia with distal muscle wasting. *Arch. Neurol.* 16: 473-485.
2. Neuhausser, 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<sup>™</sup>. 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.

## CHROMOSOMAL LOCATION

Genetic locus: SPG20 (human) mapping to 13q13.3.

## SOURCE

Spartin (D-4) is a mouse monoclonal antibody raised against amino acids 1-141 mapping at the N-terminus of Spartin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Spartin (D-4) is available conjugated to agarose (sc-271888 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271888 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271888 PE), fluorescein (sc-271888 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271888 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271888 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271888 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271888 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271888 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271888 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## RESEARCH USE

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

## APPLICATIONS

Spartin (D-4) is recommended for detection of Spartin of human origin by Western Blotting (starting dilution 1:100, 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 Spartin siRNA (h): sc-61601, Spartin shRNA Plasmid (h): sc-61601-SH and Spartin shRNA (h) Lentiviral Particles: sc-61601-V.

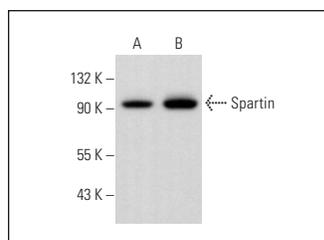
Molecular Weight of Spartin: 73 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, HT-1080 whole cell lysate: sc-364183 or SK-N-MC cell lysate: sc-2237.

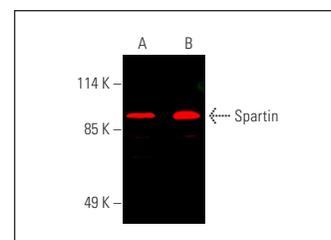
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Spartin (D-4): sc-271888. Western blot analysis of Spartin expression in HT-1080 (A) and SK-N-MC (B) whole cell lysates.



Spartin (D-4): sc-271888. Near-Infrared western blot analysis of Spartin expression in HT-1080 (A) and SK-N-MC (B) whole cell lysates. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

## SELECT PRODUCT CITATIONS

1. Zhao, J. and Hedera, P. 2015. Strumpellin and Spartin, hereditary spastic paraplegia proteins, are binding partners. *J. Exp. Neurosci.* 9: 15-25.

## 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](http://www.scbt.com) for detailed protocols and support products.