

Astrotactin (C-15): sc-51032

BACKGROUND

Neuronal migration of the central nervous system is a specialized form of cell motility that takes place in the laminar structure of the cortical regions of brain. Astrotactin is a neuronal cell surface protein that is expressed on postmitotic neuronal precursors in the cerebellum, hippocampus, cerebrum and olfactory bulb. It mediates neuron-astroglial interactions and is also implicated in synaptic development as well as many other neuronal activities. Astrotactin has three epidermal growth factor repeat domains and two Fibronectin type III repeat domains. The human Astrotactin gene maps to 1q25.2 and shows extensive homology to the mouse Astrotactin gene. Mutations in the Astrotactin gene are linked to neuronal migration defects in both species.

REFERENCES

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- Stitt, T.N. and Hatten, M.E. 1990. Antibodies that recognize Astrotactin block granule neuron binding to astroglia. *Neuron* 5: 639-649.
- Fishell, G. and Hatten, M.E. 1992. Astrotactin provides a receptor system for CNS neuronal migration. *Development* 113: 755-765.
- Zheng, C., et al. 1996. CNS gene encoding Astrotactin, which supports neuronal migration along glial fibers. *Science* 272:417-419.
- Adams, N.C., et al. 2002. Mice that lack Astrotactin have slowed neuronal migration. *Development* 129: 965-972.
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- Chen, Y.T., et al. 2005. Deficits in motor coordination with aberrant cerebellar development in mice lacking tes-ticular orphan nuclear receptor 4. *Mol. Cell. Biol.* 25: 2722-2732.

CHROMOSOMAL LOCATION

Genetic locus: ASTN1 (human) mapping to 1q25.2; Astn1 (mouse) mapping to 1 H1.

SOURCE

Astrotactin (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Astrotactin 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-51032 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

Astrotactin (C-15) is recommended for detection of Astrotactin 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).

Astrotactin (C-15) is also recommended for detection of Astrotactin in additional species, including bovine.

Suitable for use as control antibody for Astrotactin siRNA (h): sc-60216, Astrotactin siRNA (m): sc-60217, Astrotactin shRNA Plasmid (h): sc-60216-SH, Astrotactin shRNA Plasmid (m): sc-60217-SH, Astrotactin shRNA (h) Lentiviral Particles: sc-60216-V and Astrotactin shRNA (m) Lentiviral Particles: sc-60217-V.

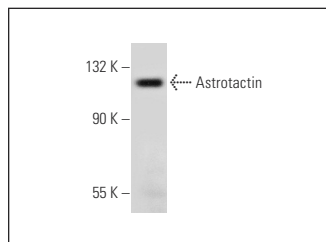
Molecular Weight of Astrotactin: 145 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

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



Astrotactin (C-15): sc-51032. Western blot analysis of Astrotactin expression in IMR-32 whole cell lysate.

RESEARCH USE

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

MONOS
Satisfaction
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Try **Astrotactin (H-9): sc-514299**, our highly recommended monoclonal alternative to Astrotactin (C-15).