Agrin (H-300): sc-25528

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BIOTECHNOLOGY

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BACKGROUND

Agrin is a molecule that resides in the basal lamina of muscle cells and directs key events in post synaptic differentiation. Most notably, Agrin is responsible for the clustering of acetylcholine receptors (AChRs) on the cell surface and their localization to the neuromuscular junction. Several Agrin variants have been identified which arise from alternative mRNA splicings. Agrin splice forms having inserts at two sites in the carboxy terminus designated "y" and "z" display a high affinity for AChRs, while splice forms lacking these inserts associate with AChRs weakly. Muscle α-dystroglycan has been postulated to be the receptor for the clustering activity of Agrin; however, this is a point of contention. Tyrosine phosphorylation has been implicated as a required early step in AChR aggregation. Interestingly, a unique receptor tyrosine kinase, designated MuSK, has been discovered that interacts with Agrin and is specifically localized to developing muscle.

REFERENCES

1. Bowen, D.C., et al. 1996. Neural Agrin activates a high-affinity receptor in C2 muscle cells that is unresponsive to muscle Agrin. J. Neurosci. 16: 3791-3797.

2. Gautam, M., et al. 1996. Defective neuromuscular synaptogenesis in Agrin-deficient mutant mice. Cell 85: 525-535.

3. Slater, C.R. 1996. Agrin signals at the junction. Nature 381: 478-479.

4. Gesemann, M., et al. 1996. Alternative splicing of Agrin alters its binding to heparin, dystroglycan, and the putative Agrin receptor. Neuron 16: 755-767.

CHROMOSOMAL LOCATION

Genetic locus: AGRN (human) mapping to 1p36.33; Agrn (mouse) mapping to 4 E2.

SOURCE

Agrin (H-300) is a rabbit polyclonal antibody raised against amino acids 1727-2026 of Agrin 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.

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.

APPLICATIONS

Agrin (H-300) is recommended for detection of Agrin 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).
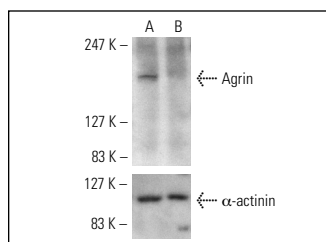
Agrin (H-300) is also recommended for detection of Agrin in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Agrin siRNA (h): sc-29652, Agrin siRNA (m): sc-29653, Agrin shRNA Plasmid (h): sc-29652-SH, Agrin shRNA Plasmid (m): sc-29653-SH, Agrin shRNA (h) Lentiviral Particles: sc-29652-V and Agrin shRNA (m) Lentiviral Particles: sc-29653-V.

Molecular Weight of Agrin: 200 kDa.

Positive Controls: mouse brain extract: sc-2253 or EOC 20 whole cell lysate: sc-364187.

DATA

Agrin siRNA (m): sc-29653. Western blot analysis of Agrin expression in non-transfected control (**A**) and Agrin siRNA transfected (**B**) LADMAC cells. Blot probed with Agrin (H-300): sc-25528. α-actinin (H-2): sc-17829 used as specificity and loading control.

SELECT PRODUCT CITATIONS

1. Didangelos, A., et al. 2010. Proteomics characterization of extracellular space components in the human aorta. Mol. Cell. Proteomics 9: 2048-2062.

2. Itoh, Y., et al. 2011. Astrocytes and pericytes cooperatively maintain a capillary-like structure composed of endothelial cells on gel matrix. Brain Res. 1406: 74-83.

3. Yin, X., et al. 2013. Glycoproteomic analysis of the secretome of human endothelial cells. Mol. Cell. Proteomics 12: 956-978.

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Try **Agrin (D-2): sc-374117**, our highly recommended monoclonal alternative to Agrin (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Agrin (D-2): sc-374117**.