

UNC5H1 (H-115): sc-135269

BACKGROUND

The UNC5H family of proteins act as transmembrane receptors for netrin-1 and play a crucial role in axon guidance and migration of neural cells. Additionally, when cleaved by a caspase to produce an intracellular fragment containing a death domain, UNC5H receptors induce apoptosis. This activity is blocked by the binding of netrin-1. In the absence of netrin-1, UNC5H receptors act as tumor suppressors by inhibiting anchorage-independent growth and invasion, but mutation of these receptors provides a potential mechanism for tumorigenicity. The expression of UNC5H receptors is down-regulated in multiple carcinomas, including colorectal, breast, ovary, uterus, stomach, lung and kidney cancers. UNC5H1, also known as UNC5HA (unc-5 homolog A), is a member of the UNC5H family of proteins and is localized to the cell membrane. Three isoforms of UNC5H1 exist due to alternative splicing events.

REFERENCES

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3. Thiebault, K., et al. 2003. The netrin-1 receptors UNC5H are putative tumor suppressors controlling cell death commitment. *Proc. Natl. Acad. Sci. USA* 100: 4173-4178.
4. Kruger, R.P., et al. 2004. Mapping netrin receptor binding reveals domains of UNC5 regulating its tyrosine phosphorylation. *J. Neurosci.* 24: 10826-10834.
5. Kuramoto, T., et al. 2004. Rat neurological mutations cerebellar vermis defect and hobble are caused by mutations in the netrin-1 receptor gene UNC5H3. *Brain Res. Mol. Brain Res.* 122: 103-108.
6. Klar, J., et al. 2005. RAR-related orphan receptor A isoform 1 (ROR α 1) is disrupted by a balanced translocation t(4;15)(q22.3;q21.3) associated with severe obesity. *Eur. J. Hum. Genet.* 13: 928-934.
7. Dillon, A.K., et al. 2007. UNC5C is required for spinal accessory motor neuron development. *Mol. Cell. Neurosci.* 35: 482-489.
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CHROMOSOMAL LOCATION

Genetic locus: UNC5A (human) mapping to 5q35.2; Unc5a (mouse) mapping to 13 B1.

SOURCE

UNC5H1 (H-115) is a rabbit polyclonal antibody raised against amino acids 349-463 mapping within an internal region of UNC5H1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

UNC5H1 (H-115) is recommended for detection of Netrin receptor Unc-5 homolog A precursor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

UNC5H1 (H-115) is also recommended for detection of Netrin receptor Unc-5 homolog A precursor in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for UNC5H1 siRNA (h): sc-63185, UNC5H1 siRNA (m): sc-63186, UNC5H1 shRNA Plasmid (h): sc-63185-SH, UNC5H1 shRNA Plasmid (m): sc-63186-SH, UNC5H1 shRNA (h) Lentiviral Particles: sc-63185-V and UNC5H1 shRNA (m) Lentiviral Particles: sc-63186-V.

Molecular Weight of UNC5H1: 93 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.

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.