

UNC5H3 (K-18): sc-54442

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, UNC5H receptors induce apoptosis when cleaved by a caspase, producing an intracellular fragment containing a death domain. 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 downregulated in multiple cancers, including colorectal, breast, ovary, uterus, stomach, lung and kidney cancers. UNC5H3, also known as UNC5C, plays an important role in the development of spinal accessory motor neurons. It is also involved in mediating the repulsive action for netrin-1 and it serves as a stop signal for migratory cells.

REFERENCES

1. Llambi, F., et al. 2001. Netrin-1 acts as a survival factor via its receptors Unc5H and DCC. *EMBO J.* 20: 2715-2722.
2. Komatsuzaki, K., et al. 2002. Modulation of G_{iα2} signaling by the axonal guidance molecule Unc5H2. *Biochem. Biophys. Res. Commun.* 297: 898-905.
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.

CHROMOSOMAL LOCATION

Genetic locus: UNC5C (human) mapping to 4q22.3; Unc5c (mouse) mapping to 3 H1.

SOURCE

UNC5H3 (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of UNC5H3 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-54442 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.

RESEARCH USE

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

APPLICATIONS

UNC5H3 (K-18) is recommended for detection of UNC5H3 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).

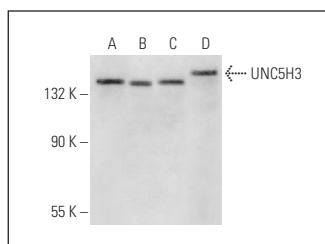
UNC5H3 (K-18) is also recommended for detection of UNC5H3 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for UNC5H3 siRNA (h): sc-72284, UNC5H3 siRNA (m): sc-72285, UNC5H3 shRNA Plasmid (h): sc-72284-SH, UNC5H3 shRNA Plasmid (m): sc-72285-SH, UNC5H3 shRNA (h) Lentiviral Particles: sc-72284-V and UNC5H3 shRNA (m) Lentiviral Particles: sc-72285-V.

Molecular Weight of UNC5H3: 130 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

DATA



UNC5H3 (K-18): sc-54442. Western blot analysis of UNC5H3 expression in K-562 (A), Jurkat (B), COLO 205 (C) and HeLa (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Forrest, C.M., et al. 2011. Molecular changes associated with hippocampal long-lasting depression induced by the serine protease subtilisin-A. *Eur. J. Neurosci.* 34: 1241-1253.
2. Forrest, C.M., et al. 2013. Prenatal inhibition of the tryptophan-kynurenine pathway alters synaptic plasticity and protein expression in the rat hippocampus. *Brain Res.* 1504: 1-15.
3. Forrest, C.M., et al. 2013. Involvement of the proteasome and caspase activation in hippocampal long-term depression induced by the serine protease subtilisin. *Neuroscience* 231: 233-246.

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Try **UNC5H3 (Zg06): sc-80422**, our highly recommended monoclonal alternative to UNC5H3 (K-18).