SANTA CRUZ BIOTECHNOLOGY, INC.

neuropilin (h): 293T Lysate: sc-177622

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Neuropilin is a type I transmembrane receptor that has been implicated in aspects of axon growth and guidance and has been shown to act as a high affinity receptor for class III Semaphorins and vascular endothelial growth factor (VEGF). A closely related protein, neuropilin-2, shares a common domain structure and signifcant homology with neuropilin and also acts as a receptor for the class III Semaphorins and VEGF. Both neuropilins are involved in regulating many physiological pathways including axonal guidance and angiogenesis, however they exhibit differential expression in the adult vasculature. Neuropilin-2 is polysialylated and expressed on the surface of dendritic cells. It is also expressed by venous and lymphatic endothelium. Neuropilin is expressed predominantly by arterial endothelium.

REFERENCES

1. Kolodkin, A.L., et al. 1993. The Semaphorin genes encode a family of transmembrane and secreted growth cone guidance molecules. Cell 75: 1389-1399.
2. Puschel, A.W., et al. 1995. Murine Semaphorin D/collapsin is a member of a diverse gene family and creates domains inhibitory for axonal extension. Neuron 14: 941-948.
3. Messersmith, E.K., et al. 1995. Semaphorin II can function as a selective chemorepellent to pattern sensory projections in the spinal cord. Neuron 14: 949-959.
4. Dodd, J., et al. 1995. Axon guidance: a compelling case for repelling growth cones. Cell 81: 471-474.
5. Wright, D.E., et al. 1995. The guidance molecule Semaphorin III is expressed in regions of spinal cord and periphery avoided by growing sensory axons. J. Comp. Neurol. 361: 321-333.
6. He, Z., et al. 1997. Neuropilin is a receptor for the axonal chemorepellent Semophorin III. Cell 90: 739-751.
7. Kolodkin, A.L., et al. 1997. Neuropilin is a Semaphorin III receptor. Cell 90: 753-762.
8. Curreli, S., et al. 2007. Polysialylated neuropilin-2 is expressed on the surface of human dendritic cells and modulates dendritic cell-T lymphocyte interactions. J. Biol. Chem. 282: 30346-30356.
9. Yang, X.H., et al. 2007. Advancements in expression of vascular endothelial growth factor receptors in skin diseases. Zhongguo Yi Xue Ke Xue Yuan Xue Bao 29: 279-282.

CHROMOSOMAL LOCATION

Genetic locus: NRP1 (human) mapping to 10p11.22.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PRODUCT

neuropilin (h): 293T Lysate represents a lysate of human neuropilin transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

neuropilin (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive neuropilin antibodies. Recommended use: 10-20 µl per lane.

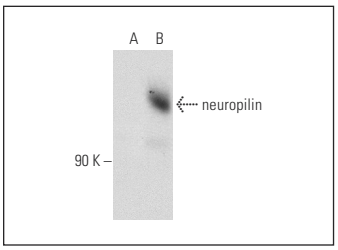
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

neuropilin (A-12): sc-5307 is recommended as a positive control antibody for Western Blot analysis of enhanced human neuropilin expression in neuropilin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



neuropilin (A-12): sc-5307. Western blot analysis of neuropilin expression in non-transfected: sc-117752 (**A**) and human neuropilin transfected: sc-177622 (**B**) 293T whole cell lysates.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.