

# neuropilin-2 (E-20): sc-54130

## 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 significant 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

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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.
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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: NRP2 (human) mapping to 2q33.3; Nrp2 (mouse) mapping to 1 C2.

## SOURCE

neuropilin-2 (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of neuropilin-2 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-54130 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

neuropilin-2 (E-20) is recommended for detection of neuropilin-2 isoforms A22, A0 and A17 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

neuropilin-2 (E-20) is also recommended for detection of neuropilin-2 isoforms A22, A0 and A17 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for neuropilin-2 siRNA (h): sc-36040, neuropilin-2 siRNA (m): sc-36041, neuropilin-2 shRNA Plasmid (h): sc-36040-SH, neuropilin-2 shRNA Plasmid (m): sc-36041-SH, neuropilin-2 shRNA (h) Lentiviral Particles: sc-36040-V and neuropilin-2 shRNA (m) Lentiviral Particles: sc-36041-V.

Molecular Weight of neuropilin-2: 116 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410 or HUV-EC-C whole cell lysate: sc-364180.

## 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) 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.