

## robo4 (C-20): sc-46497

### BACKGROUND

Secreted leucine-rich repeat-containing proteins 1 through 3 (Slit1-3) are secreted glycoproteins that influence axonal guidance and mediate normal neural progression by acting as high-affinity signaling ligands for the repulsive guidance receptors, robo1 and robo2 (also designated roundabout 1 and 2). Interactions between the robo receptor and Slit ligand families of proteins initiate signaling cascades that repel axonal outgrowth. The arrangement of the extracellular domains of robo4 diverges significantly from that of all other robo family members. Robo4 is the only robo family member expressed in primary endothelial cells. It binds Slit and inhibits cellular migration in a heterologous expression system. Together, the robo proteins prescribe developmental paths during neural development.

### REFERENCES

- Huminiemi, L., et al. 2002. Magic roundabout is a new member of the roundabout receptor family that is endothelial specific and expressed at sites of active angiogenesis. *Genomics* 79: 547-552.
- Park, K.W., et al. 2003. Robo4 is a vascular-specific receptor that inhibits endothelial migration. *Dev. Biol.* 261: 251-267
- Middleton, R., et al. 2003. Improving the comparative map of porcine chromosome 9 with respect to human chromosomes 1, 7 and 11. *Cytogenet. Genome Res.* 102: 128-132.
- Suchting, S., et al. 2005. Soluble robo4 receptor inhibits *in vivo* angiogenesis and endothelial cell migration. *FASEB J.* 19: 121-123.
- Seth, P., et al. 2005. Magic roundabout, a tumor endothelial marker: expression and signaling. *Biochem. Biophys. Res. Commun.* 332: 533-541.
- SWISS-PROT/TrEMBL (Q8WZ75). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

### CHROMOSOMAL LOCATION

Genetic locus: ROBO4 (human) mapping to 11q24.2; Robo4 (mouse) mapping to 9 A4.

### SOURCE

robo4 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of robo4 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-46497 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

robo4 (C-20) is recommended for detection of robo4 isoforms 1 and 2 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).

Suitable for use as control antibody for robo4 siRNA (h): sc-44500, robo4 siRNA (m): sc-44501, robo4 shRNA Plasmid (h): sc-44500-SH, robo4 shRNA Plasmid (m): sc-44501-SH, robo4 shRNA (h) Lentiviral Particles: sc-44500-V and robo4 shRNA (m) Lentiviral Particles: sc-44501-V.

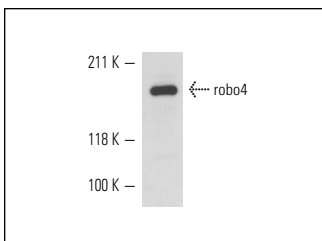
Molecular Weight of robo4: 160 kDa.

Positive Controls: A-431 nuclear extract: sc-2122 or A-10 cell lysate: sc-3806.

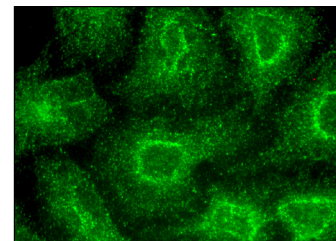
### RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

### DATA



robo4 (C-20): sc-46497. Western blot analysis of robo4 expression in A-10 whole cell lysate.



robo4 (C-20): sc-46497. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and perinuclear localization.

### SELECT PRODUCT CITATIONS

- Mulik, S., et al. 2011. Activation of endothelial roundabout receptor 4 reduces the severity of virus-induced keratitis. *J. Immunol.* 186: 7195-7204.

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Try **robo4 (D-3): sc-166872**, our highly recommended monoclonal alternative to robo4 (C-20).