

robo2 (K-18): sc-31607

BACKGROUND

Specialized cells at the midline, which separates the left and right halves of the CNS, have a number of roles in directing growth cone behavior. In the vertebrate spinal cord, the insect ventral nerve cord and *C. elegans*, midline cells produce guidance cues such as Nectins and Slit, which act as attractants and repellents, respectively. These cells may act as gatekeepers to prevent axons from crossing the midline and to induce a switch in growth cone responsiveness to guidance cues beyond the gateway. One such gatekeeper, robo, is an axon guidance receptor that defines a novel subfamily of Ig superfamily proteins that are conserved from fruit flies to mammals. robo acts as a receptor for the repellent Slit and functions in a cell-autonomous fashion. Non-crossing axons express high levels of robo, whereas crossing axons express low levels of robo before reaching the midline and high levels after they cross. robo1 and robo2 are two human homologs of the *Drosophila* protein Roundabout. robo1 is also homologous to the *C. elegans* gene SAX-3, whereas robo2 is homologous to the zebrafish gene astray.

REFERENCES

- Kidd, T., Brose, K., Mitchell, K.J., Fetter, R.D., Tessier-Lavigne, M., Goodman, C.S. and Tear, G. 1998. Roundabout controls axon crossing of the CNS midline and defines a novel subfamily of evolutionarily conserved guidance receptors. *Cell* 92: 205-215.
- Zallen, J.A., Yi, B.A. and Bargmann, C.I. 1998. The conserved immunoglobulin superfamily member SAX-3/robo directs multiple aspects of axon guidance in *C. elegans*. *Cell* 92: 217-227.
- van Vactor, D. and Flanagan, J.G. 1999. The middle and the end: Slit brings guidance and branching together in axon pathway selection. *Neuron* 22: 649-652.
- Fricke, C., Lee, J.S., Geiger-Rudolph, S., Bonhoeffer, F. and Chien, C.B. 2001. Astray, a zebrafish roundabout homolog required for retinal axon guidance. *Science* 292: 507-510.
- LocusLink Report (LocusID: 6091). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: ROBO2 (human) mapping to 3p12.3; Robo2 (mouse) mapping to 16 C3.1.

SOURCE

robo2 (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of robo2 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-31607 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

robo2 (K-18) is recommended for detection of robo2 of human and, to a lesser extent, mouse and rat 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).

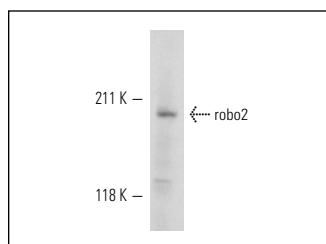
Suitable for use as control antibody for robo2 siRNA (h): sc-42254, robo2 siRNA (m): sc-42255, robo2 shRNA Plasmid (h): sc-42254-SH, robo2 shRNA Plasmid (m): sc-42255-SH, robo2 shRNA (h) Lentiviral Particles: sc-42254-V and robo2 shRNA (m) Lentiviral Particles: sc-42255-V.

Molecular Weight of robo2: 172 kDa.

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



robo2 (K-18): sc-31607. Western blot analysis of robo2 expression in mouse brain tissue extract.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try **robo2 (A-10): sc-376177**, our highly recommended monoclonal alternative to robo2 (K-18).