SANTA CRUZ BIOTECHNOLOGY, INC.

robo1 (H-200): sc-25672

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 in *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 sax3, whereas Robo2 is homologous to the zebrafish gene astray.

CHROMOSOMAL LOCATION

Genetic locus: ROBO1 (human) mapping to 3p12.3; Robo1 (mouse) mapping to 16 C3.1.

SOURCE

robo1 (H-200) is a rabbit polyclonal antibody raised against amino acids 1452-1651 of robo1 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.

APPLICATIONS

robo1 (H-200) is recommended for detection of robo1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

robo1 (H-200) is also recommended for detection of robo1 in additional species, including bovine, canine and porcine.

Suitable for use as control antibody for robo1 siRNA (h): sc-42252, robo1 siRNA (m): sc-42253, robo1 shRNA Plasmid (h): sc-42252-SH, robo1 shRNA Plasmid (m): sc-42253-SH, robo1 shRNA (h) Lentiviral Particles: sc-42252-V and robo1 shRNA (m) Lentiviral Particles: sc-42253-V.

Molecular Weight of robo1: 125 kDa.

Positive Controls: human adrenal gland extract: sc-363761 or JM1 whole cell lysate: sc-364233.

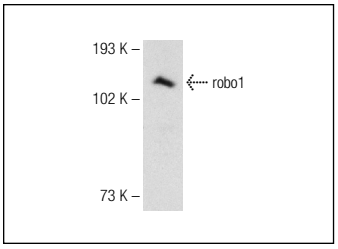
STORAGE

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

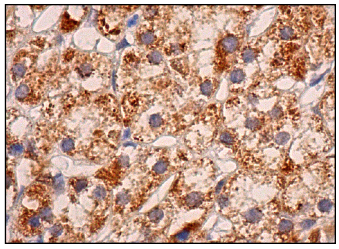
RESEARCH USE

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

DATA



robo1 (H-200): sc-25672. Western blot analysis of robo1 expression in JM1 whole cell lysate.



robo1 (H-200): sc-25672. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Tie, J., et al. 2010. MiR-218 inhibits invasion and metastasis of gastric cancer by targeting the robo1 receptor. PLoS Genet. 6: e1000879.
2. Han, X. and Zhang, M.C. 2010. Potential anti-angiogenic role of Slit2 in corneal neovascularization. Exp. Eye Res. 90: 742-749.
3. Brantley-Sieders, D.M., et al. 2011. Angiocrine factors modulate tumor proliferation and motility through EphA2 repression of Slit2 tumor suppressor function in endothelium. Cancer Res. 71: 976-987.
4. Liu, J.B., et al. 2011. Expression of Slit2 and Robo1 after traumatic lesions of the rat spinal cord. Acta Histochem. 113: 43-48.
5. Yang, L., et al. 2012. Silencing of miRNA-218 promotes migration and invasion of breast cancer via Slit2-Robo1 pathway. Biomed. Pharmacother. 66: 535-540.
6. He, H., et al. 2013. The microRNA-218 and ROBO-1 signaling axis correlates with the lymphatic metastasis of pancreatic cancer. Oncol. Rep. 30: 651-658.
7. Nguyen, L.S., et al. 2013. Contribution of copy number variants involving nonsense-mediated mRNA decay pathway genes to neuro-developmental disorders. Hum. Mol. Genet. 22: 1816-1825.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **robo1 (2G6): sc-293444**, our highly recommended monoclonal alternative to robo1 (H-200).