

Robo3 (dN-20): sc-19721

BACKGROUND

Drosophila melanogaster is a proven and effective model for studying developmental and cellular processes common to higher eukaryotes. Approximately 13,600 genes have been elucidated from more than 120 megabases of euchromatin, and they are organized among the chromosomes 2, 3, 4, X and Y, with the Y chromosome being predominately heterochromatic. *Drosophila* genes can be categorized based on the type of protein for which they encode and are represented by six major classifications, which include intracellular signaling proteins, transmembrane proteins, RNA binding proteins, secreted factors, transcription regulators (basic helix-loop-helix, homeodomain containing, zinc finger containing and chromatin associated) or other functional proteins. In *Drosophila*, Roundabout proteins 1-3, known as Robo1-3, are repulsive axon guidance receptors that bind to Slit, a repellent secreted by midline glia during development. Robo1-3 serve as gatekeepers, preventing midline crossing by acting in a cell autonomous fashion. The *Drosophila* Roundabout-1 gene maps to chromosome 2 and encodes a 1395 amino acid protein. The *Drosophila* Roundabout-2 gene maps to chromosome 2 and encodes a 1406 amino acid protein, known as leak. The *Drosophila* Roundabout-3 gene maps to chromosome 2 and encodes a 1342 amino acid protein.

REFERENCES

1. Adams, M.D., et al. 2000. The genome sequence of *Drosophila melanogaster*. *Science* 287: 2185-2195.
2. Rajagopalan, S., et al. 2000. Crossing the midline: roles and regulation of Robo receptors. *Neuron* 28: 767-777.
3. Simpson, J.H., et al. 2000. Short-range and long-range guidance by Slit and its Robo receptors. Robo and Robo2 play distinct roles in midline guidance. *Neuron* 28: 753-766.
4. The Interactive Fly. <http://www.sdbonline.org/fly/aimain/1aahome.htm>.
<http://www.sdbonline.org/fly/neural/roundab1.htm>
5. LocusLink Report (LocusID: 37603). <http://www.ncbi.nlm.nih.gov/LocusLink/>

SOURCE

Robo3 (dN-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Robo3 of *Drosophila melanogaster* 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-19721 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.

APPLICATIONS

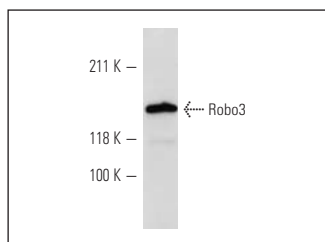
Robo3 (dN-20) is recommended for detection of Robo3 of *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Positive Controls: Schneider's *Drosophila* line 2.

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



Robo3 (dN-20): sc-19721. Western blot analysis of Robo3 expression in Schneider's *Drosophila* line 2 whole cell lysate.

RESEARCH USE

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

PROTOCOLS

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