SANTA CRUZ BIOTECHNOLOGY, INC.

Slit2 (G-19): sc-26599

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Secreted leucine-rich repeat-containing proteins 1-3 (Slit1-3) are secreted glycoproteins that influence axonal guidance and mediate normal neural development by acting as high-affinity signaling ligands for the repulsive guidance receptor, roundabout (robo). Within the developing central nervous system (CNS) of different vertebrate systems, Slit proteins are expressed in equivalent regions, suggesting a conserved function among vertebrate homologs. Slit is expressed in the midline of the central nervous system in both vertebrates and invertebrates, where it functions as a regulatory factor of mesodermal cell movement during gastrulation. Slit2 is a short range inhibitory guidance cue for retinal ganglion cell (RGC) axons that may mediate spatial progression of RGCs.

REFERENCES

1. Rothberg, J.M., et al. 1990. Slit: an extracellular protein necessary for development of midline glia and commissural axon pathways contains both EGF and LRR domains. Genes Dev. 4: 2169-2187.
2. Holmes, G.P., et al. 1998. Distinct but overlapping expression patterns of two vertebrate slit homologs implies functional roles in CNS development and organogenesis. Mech. Dev. 79: 57-72.
3. Brose, K., et al. 1999. Slit proteins bind robo receptors and have an evolutionarily conserved role in repulsive axon guidance. Cell 96: 795-806.
4. Yuan, W., et al. 1999. The mouse Slit family: secreted ligands for robo expressed in patterns that suggest a role in morphogenesis and axon guidance. Dev. Biol. 212: 290-306.
5. Hu, H. 1999. Chemorepulsion of neuronal migration by Slit2 in the developing mammalian forebrain. Neuron 23: 703-711.
6. Erskine, L., et al. 2000. Retinal ganglion cell axon guidance in the mouse optic chiasm: expression and function of robos and slits. J. Neurosci. 20: 4975-4982.

CHROMOSOMAL LOCATION

Genetic locus: SLIT2 (human) mapping to 4p15.31; Slit2 (mouse) mapping to 5 B3.

SOURCE

Slit2 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Slit2 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-26599 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

Slit2 (G-19) is recommended for detection of Slit2 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).

Slit2 (G-19) is also recommended for detection of Slit2 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for Slit2 siRNA (h): sc-42258, Slit2 siRNA (m): sc-42259, Slit2 shRNA Plasmid (h): sc-42258-SH, Slit2 shRNA Plasmid (m): sc-42259-SH, Slit2 shRNA (h) Lentiviral Particles: sc-42258-V and Slit2 shRNA (m) Lentiviral Particles: sc-42259-V.

Molecular Weight of Slit2: 200/140/55-60 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) 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.

SELECT PRODUCT CITATIONS

1. Shibata, F., et al. 2009. Roundabout 4 is expressed on hematopoietic stem cells and potentially involved in the niche-mediated regulation of the side population phenotype. Stem Cells 27: 183-190.
2. Han, X. and Zhang, M.C. 2010. Potential anti-angiogenic role of Slit2 in corneal neovascularization. Exp. Eye Res. 90: 742-749.
3. Goldberg, D., et al. 2013. Slit/Robo-mediated chemorepulsion of vagal sensory axons in the fetal gut. Dev. Dyn. 242: 9-15.

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.