SANTA CRUZ BIOTECHNOLOGY, INC.

Slit1 (G-4): sc-376756

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. 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: SLIT1 (human) mapping to 10q24.1; Slit1 (mouse) mapping to 19 C3.

SOURCE

Slit1 (G-4) is a mouse monoclonal antibody raised against amino acids 1391-1527 mapping near the C-terminus of Slit1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Slit1 (G-4) is available conjugated to agarose (sc-376756 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376756 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376756 PE), fluorescein (sc-376756 FITC), Alexa Fluor® 488 (sc-376756 AF488), Alexa Fluor® 546 (sc-376756 AF546), Alexa Fluor® 594 (sc-376756 AF594) or Alexa Fluor® 647 (sc-376756 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376756 AF680) or Alexa Fluor® 790 (sc-376756 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

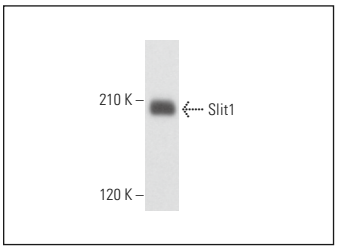
Slit1 (G-4) is recommended for detection of Slit1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Slit1 siRNA (h): sc-42256, Slit1 siRNA (m): sc-42257, Slit1 shRNA Plasmid (h): sc-42256-SH, Slit1 shRNA Plasmid (m): sc-42257-SH, Slit1 shRNA (h) Lentiviral Particles: sc-42256-V and Slit1 shRNA (m) Lentiviral Particles: sc-42257-V.

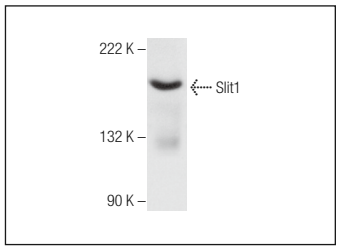
Molecular Weight of Slit1: 168 kDa.

Positive Controls: rat brain extract: sc-2392 or CCRF-CEM cell lysate: sc-2225.

DATA



Slit1 (G-4): sc-376756. Western blot analysis of Slit1 expression in CCRF-CEM whole cell lysate.



Slit1 (G-4): sc-376756. Western blot analysis of Slit1 expression in rat brain tissue extract.

SELECT PRODUCT CITATIONS

1. Beker, M., et al. 2020. Lentivirally administered glial cell line-derived neurotrophic factor promotes post-ischemic neurological recovery, brain remodeling and contralesional pyramidal tract plasticity by regulating axonal growth inhibitors and guidance proteins. Exp. Neurol. 331: 113364.
2. Wan, Q.Q., et al. 2022. Smart, biomimetic periosteum created from the cerium(III, IV) oxide-mineralized eggshell membrane. ACS Appl. Mater. Interfaces 14: 14103-14119.
3. Cui, H.S., et al. 2024. Slit1 promotes hypertrophic scar formation through the TGF-β signaling pathway. Medicina 60: 2051.

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 for detailed protocols and support products.