

plexin-B2 (A-5): sc-373969

BACKGROUND

Plexins are a family of large, transmembrane receptors for multiple classes of semaphorins in vertebrates. They are widely expressed, and regions of their extracellular domain are homologous to both scatter factor receptors and semaphorin domains. Plexins may act as semaphorin receptors alone or in combination with neuropilins. Plexins are divided into four subfamilies designated plexin-A, -B, -C, and -D. Plexin-B1 and -B2 are both receptors for SEMA4D, which stimulates axonal outgrowth of embryonic dorsal root ganglion neurons. Plexin-B3 binds to SEMA5A, which controls axon guidance and can initiate the intracellular signaling of the hepatocyte growth factor/scatter factor receptor Met.

CHROMOSOMAL LOCATION

Genetic locus: PLXNB2 (human) mapping to 22q13.33; Plxnb2 (mouse) mapping to 15 E3.

SOURCE

plexin-B2 (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1103-1136 within an extracellular domain of plexin-B2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-373969 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

plexin-B2 (A-5) is recommended for detection of plexin-B2 precursor and mature 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), 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).

Suitable for use as control antibody for plexin-B2 siRNA (h): sc-45422, plexin-B2 siRNA (m): sc-45423, plexin-B2 shRNA Plasmid (h): sc-45422-SH, plexin-B2 shRNA Plasmid (m): sc-45423-SH, plexin-B2 shRNA (h) Lentiviral Particles: sc-45422-V and plexin-B2 shRNA (m) Lentiviral Particles: sc-45423-V.

Molecular Weight of plexin-B2 precursor: 240 kDa.

Molecular Weight of plexin-B2 extracellular α subunit: 170 kDa.

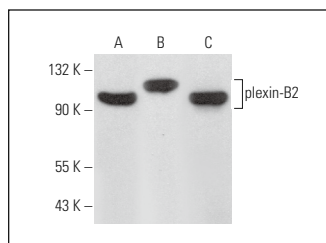
Molecular Weight of plexin-B2 transmembrane β subunit: 80 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, SK-N-MC cell lysate: sc-2237 or mouse prostate extract: sc-364249.

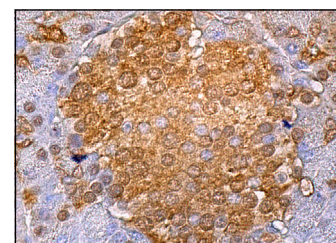
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



plexin-B2 (A-5): sc-373969. Western blot analysis of plexin-B2 expression in Neuro-2A (A) and SK-N-MC (B) whole cell lysates and mouse postnatal brain tissue extract (C). Detection reagent used: m-IgG κ BP-HRP: sc-516102.



plexin-B2 (A-5): sc-373969. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic and nuclear staining of Islets of Langerhans and glandular cells.

SELECT PRODUCT CITATIONS

- Rees, J.S., et al. 2020. Identification of the *cis*-molecular neighbours of the immune checkpoint protein B7-H4 in the breast cancer cell-line SK-BR-3 by proteomic proximity labelling. *Int. J. Oncol.* 57: 87-99.
- Karki, A., et al. 2022. Plexin-B2 and semaphorins do not drive rhabdomyosarcoma proliferation or migration. *Sarcoma* 2022: 9646909.

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.