SANTA CRUZ BIOTECHNOLOGY, INC.

plexin-B2 (N-16): sc-34506

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 homologus 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.

REFERENCES

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2. Kolodkin, A.L., et al. 1993. The semaphorin genes encode a family of transmembrane and secreted growth cone guidance molecules. Cell 75: 1389-1399.
3. Kameyama, T., et al. 1996. Identification of plexin family molecules in mice. Biochem. Biophys. Res. Commun. 226: 396-402.
4. Tamagnone, L., et al. 1997. Control of invasive growth by hepatocyte growth factor (HGF) and related scatter factors. Cytokine Growth Factor Rev. 8: 129-142.
5. Winberg, M.L., et al. 1998 Plexin-A is a neuronal semaphorin receptor that controls axon guidance. Cell 95: 903-916.
6. Takahashi, T., et al. 1999. Plexin-neuropilin-1 complexes form functional semaphorin-3A receptors. Cell 99: 59-69.
7. Tamagnone, L., et al. 1999. Plexins are a large family of receptors for transmembrane, secreted, and GPI-anchored semaphorins in vertebrates. Cell 99: 71-80.
8. Masuda, K. et al. 2004. SEMA4D stimulates axonal outgrowth of embryonic DRG sensory neurones. Genes Cells 9: 821-829.
9. Artigiani, S. et al. 2004. Plexin-B3 is a functional receptor for semaphorin-5A. EMBO Rep. 5: 710-714.

CHROMOSOMAL LOCATION

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

SOURCE

plexin-B2 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of plexin-B2 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-34506 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

plexin-B2 (N-16) is recommended for detection of plexin-B2 precursor and mature plexin-B2 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).

Suitable for use as control antibody for plexin-B2 siRNA (h): sc-45422 and plexin-B2 siRNA (m): sc-45423.

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.

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.

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.

PROTOCOLS

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