SANTA CRUZ BIOTECHNOLOGY, INC.

plexin-A1 (H-60): sc-25639

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Plexins are a family of large, transmembrane receptors for multiple classes of semaphorins in vertebrates. Plexins 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. *Drosophila* plexin A is a receptor for class I semaphorins and controls motor and axon guidance. Plexin A3 mediates cell-repelling cues. Plexins B and C are receptors for Sema 4 and Sema 7, respectively.

REFERENCES

1. Artigiani, S., et al. 1992. Plexins, semaphorins, and scatter factor receptors: a common root for cell guidance signals? IUBMB Life 48: 477-478.
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.

CHROMOSOMAL LOCATION

Genetic locus: PLXNA1 (human) mapping to 3q21.3; Plxna1 (mouse) mapping to 6 D1.

SOURCE

plexin-A1 (H-60) is a rabbit polyclonal antibody raised against amino acids 961-1020 of plexin-A1 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.

Available as agarose conjugate for immunoprecipitation, sc-25639 AC, 500 µg/0.25 ml agarose in 1 ml.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

plexin-A1 (H-60) is recommended for detection of plexin-A1 of mouse, rat and human 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).

plexin-A1 (H-60) is also recommended for detection of plexin-A1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for plexin-A1 siRNA (h): sc-42170, plexin-A1 siRNA (m): sc-42171, plexin-A1 shRNA Plasmid (h): sc-42170-SH, plexin-A1 shRNA Plasmid (m): sc-42171-SH, plexin-A1 shRNA (h) Lentiviral Particles: sc-42170-V and plexin-A1 shRNA (m) Lentiviral Particles: sc-42171-V.

Molecular Weight of plexin-A1: 200 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Cariboni, A., et al. 2007. Neuropilins and their ligands are important in the migration of Gonadotropin-releasing hormone neurons. J. Neurosci. 27: 2387-2395.
2. Müller, M.W., et al. 2007. Association of axon guidance factor semaphorin 3A with poor outcome in pancreatic cancer. Int. J. Cancer 121: 2421-2433.
3. Moretti, S., et al. 2008. Semaphorin3A signaling controls FAS (CD95)-mediated apoptosis by promoting FAS translocation into lipid rafts. Blood 111: 2290-2299.
4. Staton, C.A., et al. 2011. Expression of class 3 semaphorins and their receptors in human breast neoplasia. Histopathology 59: 274-282.

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.