

plexin-A3 (V-15): sc-10134

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 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. *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.

CHROMOSOMAL LOCATION

Genetic locus: PLXNA3 (human) mapping to Xq28; Plxn3 (mouse) mapping to X A7.3.

SOURCE

plexin-A3 (V-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of plexin-A3 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-10134 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.

RESEARCH USE

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

APPLICATIONS

plexin-A3 (V-15) is recommended for detection of plexin-A3 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-A3 (V-15) is also recommended for detection of plexin-A3 in additional species, including equine and canine.

Suitable for use as control antibody for plexin-A3 siRNA (h): sc-42174, plexin-A3 siRNA (m): sc-42175, plexin-A3 siRNA (r): sc-270148, plexin-A3 shRNA Plasmid (h): sc-42174-SH, plexin-A3 shRNA Plasmid (m): sc-42175-SH, plexin-A3 shRNA Plasmid (r): sc-270148-SH, plexin-A3 shRNA (h) Lentiviral Particles: sc-42174-V, plexin-A3 shRNA (m) Lentiviral Particles: sc-42175-V and plexin-A3 shRNA (r) Lentiviral Particles: sc-270148-V.

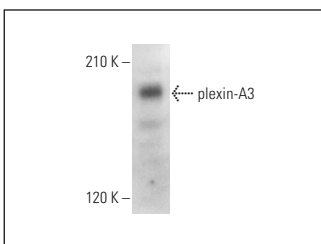
Molecular Weight of plexin-A3: 208 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



plexin-A3 (V-15): sc-10134. Western blot analysis of plexin-A3 expression in MCF7 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Gomez, C., et al. 2005. Expression of Semaphorin-3A and its receptors in endochondral ossification: potential role in skeletal development and innervation. *Dev. Dyn.* 234: 393-403.
2. Gomez, C., et al. 2007. Absence of mechanical loading in utero influences bone mass and architecture but not innervation in Myod-Myf5-deficient mice. *J. Anat.* 210: 259-271.