

plexin-A3 (A-8): sc-374662

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. Kolodkin, A.L., et al. 1993. The semaphorin genes encode a family of transmembrane and secreted growth cone guidance molecules. *Cell* 75: 1389-1399.
2. Kameyama, T., et al. 1996. Identification of plexin family molecules in mice. *Biochem. Biophys. Res. Commun.* 226: 396-402.
3. 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.
4. Winberg, M.L., et al. 1998. Plexin A is a neuronal semaphorin receptor that controls axon guidance. *Cell* 95: 903-916.
5. Takahashi, T., et al. 1999. Plexin-neuropilin-1 complexes form functional semaphorin-3A receptors. *Cell* 99: 59-69.
6. 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: PLXNA3 (human) mapping to Xq28.

SOURCE

plexin-A3 (A-8) is a mouse monoclonal antibody raised against amino acids 961-1050 of plexin-A3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

plexin-A3 (A-8) is available conjugated to agarose (sc-374662 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374662 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374662 PE), fluorescein (sc-374662 FITC), Alexa Fluor® 488 (sc-374662 AF488), Alexa Fluor® 546 (sc-374662 AF546), Alexa Fluor® 594 (sc-374662 AF594) or Alexa Fluor® 647 (sc-374662 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374662 AF680) or Alexa Fluor® 790 (sc-374662 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

plexin-A3 (A-8) is recommended for detection of plexin-A3 of 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-A3 siRNA (h): sc-42174, plexin-A3 shRNA Plasmid (h): sc-42174-SH and plexin-A3 shRNA (h) Lentiviral Particles: sc-42174-V.

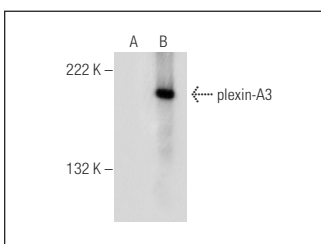
Molecular Weight of plexin-A3: 208 kDa.

Positive Controls: plexin-A3 (h2): 293T Lysate: sc-372269.

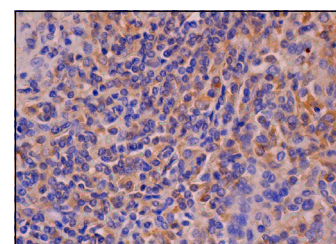
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



plexin-A3 (A-8): sc-374662. Western blot analysis of plexin-A3 expression in non-transfected: sc-117752 (A) and human plexin-A3 transfected: sc-372269 (B) 293T whole cell lysates.



plexin-A3 (A-8): sc-374662. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp.

SELECT PRODUCT CITATIONS

1. Szczurkowska, J., et al. 2022. Semaphorin3A/PlexinA3 association with the Scribble scaffold for cGMP increase is required for apical dendrite development. *Cell Rep.* 38: 110483.

STORAGE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA