

# plexin-A2 (E-1): sc-166082

## 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 SEMA4 and SEMA7, respectively.

## REFERENCES

- Artigiani, S., et al. 1992. Plexins, semaphorins, and scatter factor receptors: a common root for cell guidance signals? *IUBMB Life* 48: 477-478.
- Kolodkin, A.L., et al. 1993. The semaphorin genes encode a family of transmembrane and secreted growth cone guidance molecules. *Cell* 75: 1389-1399.
- Kameyama, T., et al. 1996. Identification of plexin family molecules in mice. *Biochem. Biophys. Res. Commun.* 226: 396-402.
- 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.
- Winberg, M.L., et al. 1998. Plexin-A is a neuronal semaphorin receptor that controls axon guidance. *Cell* 95: 903-916.
- Takahashi, T., et al. 1999. Plexin-neuropilin-1 complexes form functional semaphorin-3A receptors. *Cell* 99: 59-69.
- 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: PLXNA2 (human) mapping to 1q32.2; Plxna (mouse) mapping to 1 H6.

## SOURCE

plexin-A2 (E-1) is a mouse monoclonal antibody raised against amino acids 531-600 of plexin-A2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

plexin-A2 (E-1) is recommended for detection of plexin-A2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for plexin-A2 siRNA (h): sc-42172, plexin-A2 siRNA (m): sc-42173, plexin-A2 shRNA Plasmid (h): sc-42172-SH, plexin-A2 shRNA Plasmid (m): sc-42173-SH, plexin-A2 shRNA (h) Lentiviral Particles: sc-42172-V and plexin-A2 shRNA (m) Lentiviral Particles: sc-42173-V.

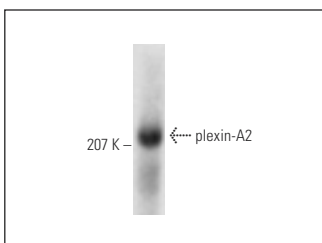
Molecular Weight of plexin-A2: 200/220 kDa.

Positive Controls: mouse brain extract: sc-2253.

## 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.

## DATA



plexin-A2 (E-1): sc-166082. Western blot analysis of plexin-A2 expression in mouse brain tissue extract.

## RESEARCH USE

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