SANTA CRUZ BIOTECHNOLOGY, INC.

plexin-A2 (A-2): sc-393939

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.

CHROMOSOMAL LOCATION

Genetic locus: PLXNA2 (human) mapping to 1q32.2; Plxna2 (mouse) mapping to 1 H6.

SOURCE

plexin-A2 (A-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1159-1196 within an internal region of plexin-A2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

plexin-A2 (A-2) is available conjugated to agarose (sc-393939 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393939 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393939 PE), fluorescein (sc-393939 FITC), Alexa Fluor® 488 (sc-393939 AF488), Alexa Fluor® 546 (sc-393939 AF546), Alexa Fluor® 594 (sc-393939 AF594) or Alexa Fluor® 647 (sc-393939 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393939 AF680) or Alexa Fluor® 790 (sc-393939 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393939 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

plexin-A2 (A-2) 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).

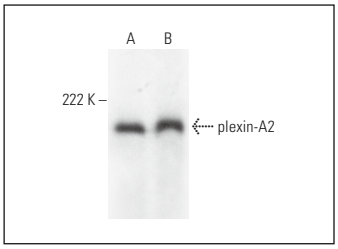
plexin-A2 (A-2) is also recommended for detection of plexin-A2 in additional species, including equine, canine and bovine.

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 heart extract: sc-2254 or rat heart extract: sc-2393.

DATA



plexin-A2 (A-2): sc-393939. Western blot analysis of plexin-A2 expression in mouse heart (**A**) and rat heart (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Lettieri, A., et al. 2023. SEMA6A drives GnRH neuron-dependent puberty onset by tuning median eminence vascular permeability. Nat. Commun. 14: 8097.
2. Hong, Y., et al. 2024. Integrative analysis identifies region- and sex-specific gene networks and Mef2c as a mediator of anxiety-like behavior. Cell Rep. 43: 114455.

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 for detailed protocols and support products.