

# plexin-B1 (A-8): sc-28372

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: PLXNB1 (human) mapping to 3p21.31; Plxnb1 (mouse) mapping to 9 F2.

## SOURCE

plexin-B1 (A-8) is a mouse monoclonal antibody raised against amino acids 771-1070 of plexin-B1 of human origin.

## PRODUCT

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

plexin-B1 (A-8) is available conjugated to agarose (sc-28372 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28372 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28372 PE), fluorescein (sc-28372 FITC), Alexa Fluor® 488 (sc-28372 AF488), Alexa Fluor® 546 (sc-28372 AF546), Alexa Fluor® 594 (sc-28372 AF594) or Alexa Fluor® 647 (sc-28372 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28372 AF680) or Alexa Fluor® 790 (sc-28372 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

plexin-B1 (A-8) is recommended for detection of plexin-B1 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), 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-B1 siRNA (h): sc-42176, plexin-B1 siRNA (m): sc-42177, plexin-B1 shRNA Plasmid (h): sc-42176-SH, plexin-B1 shRNA Plasmid (m): sc-42177-SH, plexin-B1 shRNA (h) Lentiviral Particles: sc-42176-V and plexin-B1 shRNA (m) Lentiviral Particles: sc-42177-V.

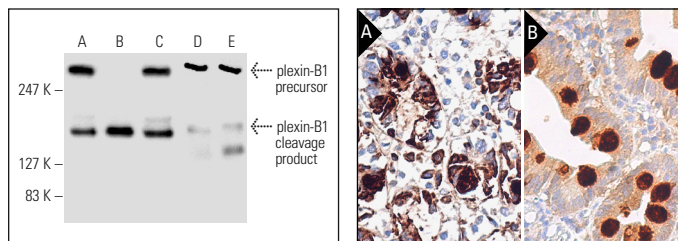
Molecular Weight of plexin-B1: 300/200 kDa.

Positive Controls: Caki-1 whole cell lysate: sc-2224, KNRK whole cell lysate: sc-2214 or mouse kidney extract: sc-2255.

## STORAGE

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

## DATA



plexin-B1 (A-8): sc-28372. Western blot analysis of plexin-B1 expression in mouse kidney (A), rat kidney (B) and mouse brain (C) tissue extracts and Caki-1 (D) and KNRK (E) whole cell lysates.

plexin-B1 (A-8): sc-28372. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of goblet cells (B).

## SELECT PRODUCT CITATIONS

- Zhu, L., et al. 2007. Regulated surface expression and shedding support a dual role for semaphorin 4D in platelet responses to vascular injury. *Proc. Natl. Acad. Sci. USA* 104: 1621-1626.
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- Harduf, H., et al. 2009. Progesterone receptor A and c-Met mediates spheroids-endometrium attachment. *Reprod. Biol. Endocrinol.* 7: 14.
- Ye, S., et al. 2010. Plexin-B1 silencing inhibits ovarian cancer cell migration and invasion. *BMC Cancer* 10: 611.
- Yang, Y.H., et al. 2011. Plexin-B1 activates NFκB and IL-8 to promote a pro-angiogenic response in endothelial cells. *PLoS ONE* 6: e25826.
- Soong, J. and Scott, G. 2013. Plexin-B1 inhibits MET through direct association and regulates Shp2 expression in melanocytes. *J. Cell Sci.* 126: 688-695.
- Le, A.P., et al. 2015. Plexin-B2 promotes invasive growth of malignant glioma. *Oncotarget* 6: 7293-7304.
- Otsu, K., et al. 2016. The semaphorin 4D-RhoA-Akt signal cascade regulates enamel matrix secretion in coordination with cell polarization during ameloblast differentiation. *J. Bone Miner. Res.* 31: 1943-1954.
- Deb Roy, A., et al. 2017. Optogenetic activation of plexin-B1 reveals contact repulsion between osteoclasts and osteoblasts. *Nat. Commun.* 8: 15831.

## RESEARCH USE

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