

# ephrin-B1 (C-6): sc-515264

## BACKGROUND

Ephrins, which act as ligands for Eph receptors, are cell-surface proteins which fall into two categories, ephrin-A and ephrin-B, based on their structure and function. Ephrin-B proteins are transmembrane and have conserved cytoplasmic tyrosine residues that are phosphorylated upon interaction with an EphB receptor. Eph receptors and ephrins exhibit complementary expression in many tissues during embryogenesis indicating that bidirectional activation of Eph receptors and ephrin-B proteins may occur at expression domain interfaces. Ephrin-B1 transduces outside-in signals through C-terminal protein interactions that effect integrin-mediated cell attachment and migration. The distribution of ephrin-B1 in the developing retina suggests that it influences retinal axon mapping along the dorsal-ventral axis and may be involved in intraretinal development.

## REFERENCES

1. Braisted, J., et al. 1997. Graded and lamina-specific distributions of ligands of EphB receptor tyrosine kinases in the developing retinotectal system. *Dev. Biol.* 191: 14-28.
2. Mellitzer, G., et al. 1999. Eph receptors and ephrins restrict cell intermingling and communication. *Nature* 400: 77-81.
3. Jensen, P.L. 2000. Eph receptors and ephrins. *Stem Cells* 18: 63-64.
4. Kalo, M.S., et al. 2001. *In vivo* tyrosine phosphorylation sites of activated ephrin-B1 and ephB2 from neural tissue. *J. Biol. Chem.* 276: 38940-38948.
5. Huynh-Do, U., et al. 2002. Ephrin-B1 transduces signals to activate integrin-mediated migration, attachment, and angiogenesis. *J. Cell Sci.* 115: 3073-3081.

## CHROMOSOMAL LOCATION

Genetic locus: EFN1 (human) mapping to Xq13.1.

## SOURCE

ephrin-B1 (C-6) is a mouse monoclonal antibody raised against amino acids 171-240 mapping near the C-terminus of ephrin-B1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ephrin-B1 (C-6) is available conjugated to agarose (sc-515264 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515264 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515264 PE), fluorescein (sc-515264 FITC), Alexa Fluor<sup>®</sup> 488 (sc-515264 AF488), Alexa Fluor<sup>®</sup> 546 (sc-515264 AF546), Alexa Fluor<sup>®</sup> 594 (sc-515264 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-515264 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-515264 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-515264 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## RESEARCH USE

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

## APPLICATIONS

ephrin-B1 (C-6) is recommended for detection of ephrin-B1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ephrin-B1 siRNA (h): sc-39436, ephrin-B1 shRNA Plasmid (h): sc-39436-SH and ephrin-B1 shRNA (h) Lentiviral Particles: sc-39436-V.

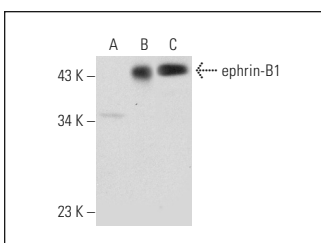
Molecular Weight of ephrin-B1: 45 kDa.

Positive Controls: ephrin-B1 (h2): 293T Lysate: sc-116420 or human platelet extract: sc-363773.

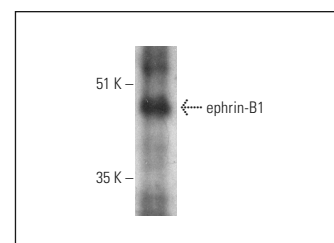
## RECOMMENDED SUPPORT REAGENTS

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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



ephrin-B1 (C-6): sc-515264. Western blot analysis of ephrin-B1 expression in non-transfected sc-117752 (A) and human ephrin-B1 transfected: sc-116420 (B) 293T whole cell lysates and human platelet extract (C).



ephrin-B1 (C-6) HRP: sc-515264 HRP. Direct western blot analysis of ephrin-B1 expression in mouse lung tissue extract.

## SELECT PRODUCT CITATIONS

1. Giandomenico, S.L., et al. 2019. Cerebral organoids at the air-liquid interface generate diverse nerve tracts with functional output. *Nat. Neurosci.* 22: 669-679.
2. Beker, M., et al. 2020. Lentivirally administered glial cell line-derived neurotrophic factor promotes post-ischemic neurological recovery, brain remodeling and contralesional pyramidal tract plasticity by regulating axonal growth inhibitors and guidance proteins. *Exp. Neurol.* 331: 113364.

## STORAGE

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