

p-ephrin-B1 (Tyr 317): sc-135691

BACKGROUND

Ephrins, which act as ligands for Eph receptors, are cell-surface proteins that 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 intratectal development. Mouse, rat, human and *Xenopus laevis* ephrin-B1 are phosphorylated on Tyr 317 *in vivo*, which may be induced by a receptor tyrosine kinase.

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. 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.
4. Huynh-Do, U., et al. 2002. Ephrin-B1 transduces signals to activate integrin-mediated migration, attachment, and angiogenesis. *J. Cell Sci.* 115: 3073-3081.
5. Nagashima, K., et al. 2002. Adaptor protein Crk is required for ephrin-B1-induced membrane ruffling and focal complex assembly of human aortic endothelial cells. *Mol. Biol. Cell* 13: 4231-4242.

CHROMOSOMAL LOCATION

Genetic locus: EFN1 (human) mapping to Xq13.1; Efnb1 (mouse) mapping to X C3.

SOURCE

p-ephrin-B1 (Tyr 317) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Tyr 300 of ephrin-B1 of *Xenopus laevis* origin.

PRODUCT

Each vial contains IgG in 100 μ l of 10 mM HEPES with 150 mM NaCl, 50% glycerol and < 0.1% BSA.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

APPLICATIONS

p-ephrin-B1 (Tyr 317) is recommended for detection of Tyr 300 phosphorylated ephrin-B1 of *Xenopus laevis* origin, correspondingly Tyr 317 phosphorylated ephrin-B1 of human origin and correspondingly Tyr 316 phosphorylated ephrin-B1 of mouse and rat origin of mouse, rat, human, *Xenopus laevis* and zebrafish origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000) and immunoprecipitation [1-2 μ l per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for ephrin-B1 siRNA (h): sc-39436, ephrin-B1 siRNA (m): sc-39437, ephrin-B1 siRNA (r): sc-156036, ephrin-B1 shRNA Plasmid (h): sc-39436-SH, ephrin-B1 shRNA Plasmid (m): sc-39437-SH, ephrin-B1 shRNA Plasmid (r): sc-156036-SH, ephrin-B1 shRNA (h) Lentiviral Particles: sc-39436-V, ephrin-B1 shRNA (m) Lentiviral Particles: sc-39437-V and ephrin-B1 shRNA (r) Lentiviral Particles: sc-156036-V.

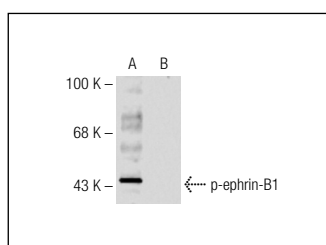
Molecular Weight of p-ephrin-B1: 45 kDa.

Positive Controls: human platelet tissue extract, mouse lung extract: sc-2390 or mouse embryo extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase (sc-200312A). 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



p-ephrin-B1 (Tyr 317): sc-135691. Western blot analysis of ephrin-B1 phosphorylation in untreated (A) and lambda protein phosphatase (sc-200312A) treated (B) rat testis tissue extracts.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.