

p-ephrin-B1 (Tyr 331): sc-135692

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. Tyr 331 is a major phosphorylation site for mouse, rat, human and chicken ephrin-B1.

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.
6. 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.
7. Xu, Z., et al. 2003. Ephrin-B1 reverse signaling activates JNK through a novel mechanism that is independent of tyrosine phosphorylation. *J. Biol. Chem.* 278: 24767-24775.

CHROMOSOMAL LOCATION

Genetic locus: EFN1 (human) mapping to Xq13.1; Efn1 (mouse) mapping to X C3.

SOURCE

p-ephrin-B1 (Tyr 331) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 331 phosphorylated ephrin-B1 of avian origin.

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.

PRODUCT

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

APPLICATIONS

p-ephrin-B1 (Tyr 331) is recommended for detection of Tyr 331 phosphorylated ephrin-B1 of chicken origin, correspondingly Tyr 343 phosphorylated ephrin-B1 of human origin and correspondingly Tyr 342 phosphorylated ephrin-B1 of mouse and rat 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.

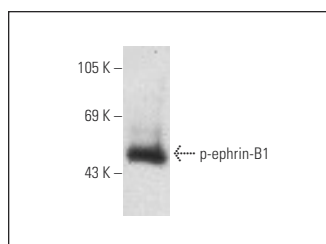
Molecular Weight of p-ephrin-B1: 45 kDa.

Positive Controls: human platelet extract: sc-363773 or rat testis extract: sc-2400.

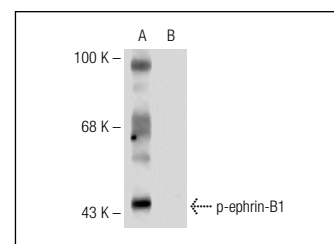
RECOMMENDED SECONDARY REAGENTS

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 331): sc-135692. Western blot analysis of ephrin-B1 phosphorylation in human platelet extract.



p-ephrin-B1 (Tyr 331): sc-135692. 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.