

# ephrin-B2 (H-83): sc-15397

## 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. The transmembrane ligand ephrin-B2 and its receptor tyrosine kinase EphB4 are specifically expressed on arterial and venous endothelial cells, respectively. Bidirectional signals mediated by both proteins play an important role in vascular development. Ephrin-B2 is essential for the normal morphogenesis of the embryonic vasculature and is angiogenic in tumors. It has been identified as an important target of chemotherapeutic treatments.

## CHROMOSOMAL LOCATION

Genetic locus: EFN2 (human) mapping to 13q33.3; Efn2 (mouse) mapping to 8 A1.1.

## SOURCE

ephrin-B2 (H-83) is a rabbit polyclonal antibody raised against amino acids 168-235 of ephrin-B2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

ephrin-B2 (H-83) is recommended for detection of ephrin-B2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

ephrin-B2 (H-83) is also recommended for detection of ephrin-B2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ephrin-B2 siRNA (h): sc-39438, ephrin-B2 siRNA (m): sc-39439, ephrin-B2 shRNA Plasmid (h): sc-39438-SH, ephrin-B2 shRNA Plasmid (m): sc-39439-SH, ephrin-B2 shRNA (h) Lentiviral Particles: sc-39438-V and ephrin-B2 shRNA (m) Lentiviral Particles: sc-39439-V.

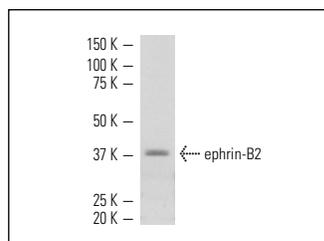
Molecular Weight of ephrin-B2: 37 kDa.

Positive Controls: A549 cell lysate: sc-2413, mouse brain extract: sc-2253 or KNRK whole cell lysate: sc-2214.

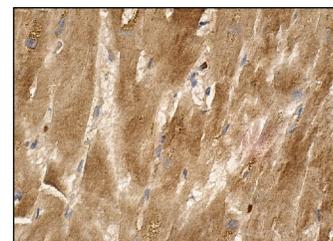
## RECOMMENDED SECONDARY REAGENTS

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 A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



ephrin-B2 (H-83): sc-15397. Western blot analysis of ephrin-B2 expression in mouse brain tissue extract.



ephrin-B2 (H-83): sc-15397. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

## SELECT PRODUCT CITATIONS

1. Cowan, C., et al. 2004. Ephrin-B2 reverse signaling is required for axon pathfinding and cardiac valve formation but not early vascular development. *Dev. Biol.* 271: 263-271.
2. Liu, J., et al. 2014. Constitutively active Notch1 signaling promotes endothelial-mesenchymal transition in a conditional transgenic mouse model. *Int. J. Mol. Med.* 34: 669-676.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **ephrin-B2 (F-2): sc-398735**, our highly recommended monoclonal alternative to ephrin-B2 (H-83). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **ephrin-B2 (F-2): sc-398735**.