

# ephrin-B1 (A-20): sc-1011

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: EFNB1 (human) mapping to Xq13.1; Efnb1 (mouse) mapping to X C3.

## SOURCE

ephrin-B1 (A-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ephrin-B1 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.

Blocking peptide available for competition studies, sc-1011 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ephrin-B1 (A-20) is recommended for detection of ephrin-B1 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-B1 (A-20) is also recommended for detection of ephrin-B1 in additional species, including canine, bovine and avian.

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

Molecular Weight of ephrin-B1: 45 kDa.

Positive Controls: ephrin-B1 (h): 293T Lysate: sc-176692, mouse lung extract: sc-2390 or mouse embryo extract: sc-364239.

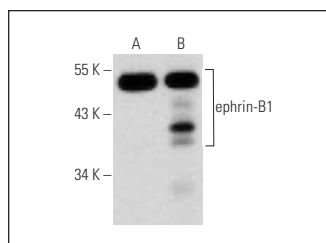
## STORAGE

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

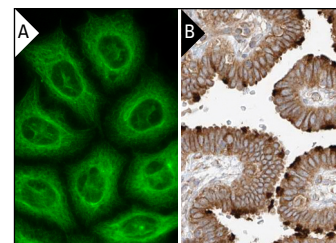
## RESEARCH USE

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

## DATA



ephrin-B1 (A-20): sc-1011. Western blot analysis of ephrin-B1 expression in non-transfected: sc-117752 (A) and human ephrin-B1 transfected: sc-176692 (B) 293T whole cell lysates.



ephrin-B1 (A-20): sc-1011. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube showing membrane staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

## SELECT PRODUCT CITATIONS

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- Davy, A., et al. 2006. Inhibition of gap junction communication at ectopic Eph/ephrin boundaries underlies craniofrontonasal syndrome. *PLoS Biol.* 4: e315.
- Hashimoto, T., et al. 2007. Ephrin-B1 localizes at the slit diaphragm of the glomerular podocyte. *Kidney Int.* 72: 954-964.
- Alfaro D., et al. 2008. Alterations in the thymocyte phenotype of EphB-deficient mice largely affect the double negative cell compartment. *Immunology* 125: 131-143.
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- Makarov, R., et al. 2010. The impact of CFNS-causing EFNB1 mutations on ephrin-B1 function. *BMC Med. Genet.* 11: 98.

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Try **ephrin-B1 (C-6): sc-515264**, our highly recommended monoclonal alternative to ephrin-B1 (A-20).