

# EphB4 (C-16)-R: sc-7284-R

## BACKGROUND

The Eph subfamily represents the largest group of receptor protein tyrosine kinases identified to date. While the biological activities of these receptors have yet to be determined, there is increasing evidence that they are involved in central nervous system function and in development. The Eph subfamily receptors of human origin (and their murine/avian homologs) include EphA1 (Eph), EphA2 (Eck), EphA3 (Hek4), EphA4 (Hek8), EphA5 (Hek7), EphA6 (Hek12), EphA7 (Hek11/MDK1), EphA8 (Hek3), EphB1 (Hek6), EphB2 (Hek5), EphB3 (Cek10, Hek2), EphB4 (Htk), EphB5 (Hek9) and EphB6 (Mep). Ligands for Eph receptors include ephrin-A4 (LERK-4) which binds EphA3 and EphB1. In addition, ephrin-A2 (ELF-1) has been described as the ligand for EphA4, ephrin-A3 (Ehk1-L) as the ligand for EphA5 and ephrin-B2 (Htk-L) as the ligand for EphB4 (Htk).

## REFERENCES

1. Beckmann, M.P., et al. 1994. Molecular characterization of a family of ligands for Eph-related tyrosine kinase receptors. *EMBO J.* 13: 3757-3762.
2. Cheng, H.-J. and Flanagan, J.G. 1994. Identification and cloning of ELF-1, a developmentally expressed ligand for the Mek4 and Sek receptor tyrosine kinases. *Cell* 79: 157-168.
3. Ciossek, T., et al. 1995. Identification of alternatively spliced mRNAs encoding variants of MDK1, a novel receptor tyrosine kinase expressed in the murine nervous system. *Oncogene* 10: 97-108.
4. Kozlosky, C.J., et al. 1995. Ligands for the receptor tyrosine kinases Hek and Elk: isolation of cDNAs encoding a family of proteins. *Oncogene* 10: 299-306.

## CHROMOSOMAL LOCATION

Genetic locus: EPHB4 (human) mapping to 7q22.1; Ephb4 (mouse) mapping to 5 G2.

## SOURCE

EphB4 (C-16)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of EphB4 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-7284 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

EphB4-R (C-16) is recommended for detection of EphB4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 EphB4 siRNA (h): sc-39953, EphB4 siRNA (m): sc-39954, EphB4 shRNA Plasmid (h): sc-39953-SH, EphB4 shRNA Plasmid (m): sc-39954-SH, EphB4 shRNA (h) Lentiviral Particles: sc-39953-V and EphB4 shRNA (m) Lentiviral Particles: sc-39954-V.

Molecular Weight of EphB4: 120 kDa.

## SELECT PRODUCT CITATIONS

1. Egawa, M., et al. 2003. Ephrin-B1 is expressed on human luteinizing granulosa cells in corpora lutea of the early luteal phase: the possible involvement of the B class Eph-ephrin system during corpus luteum formation. *J. Clin. Endocrinol. Metab.* 88: 4384-4392.
2. Berclaz, G., et al. 2003. Activation of the receptor protein tyrosine kinase EphB4 in endometrial hyperplasia and endometrial carcinoma. *Ann. Oncol.* 14: 220-226.
3. Becker, F., et al. 2004. A three-hybrid approach to scanning to proteome for targets of small molecule kinase inhibitors. *Chem. Biol.* 11: 211-233.
4. Hafner, C., et al. 2004. Differential gene expression of Eph receptors and ephrins in benign human tissues and cancers. *Clin. Chem.* 50: 490-499.
5. Xia, G., et al. 2005. EphB4 expression and biological significance in prostate cancer. *Cancer Res.* 65: 4623-4632.
6. Xia, G., et al. 2005. Up-regulation of EphB4 in mesothelioma and its biological significance. *Clin. Cancer Res.* 11: 4305-4315.
7. Xia, G., et al. 2006. EphB4 receptor tyrosine kinase is expressed in bladder cancer and provides signals for cell survival. *Oncogene* 25: 769-780.
8. Zamora, D.O., et al. 2006. Human leukocytes express ephrin-B2 which activates microvascular endothelial cells. *Cell. Immunol.* 242: 99-109.
9. Xu, J., et al. 2007. Effect of Akt inhibition on scatter factor-regulated gene expression in DU-145 human prostate cancer cells. *Oncogene* 26: 2925-2938.

## PROTOCOLS

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



Try **EphB4 (H-10): sc-365510** or **EphB4 (5G2F8): sc-130081**, our highly recommended monoclonal alternatives to EphB4 (C-16).