

EphB4 (5G2F8): sc-130081

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).

CHROMOSOMAL LOCATION

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

SOURCE

EphB4 (5G2F8) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 771-987 of EphB4 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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.

PROTOCOLS

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

APPLICATIONS

EphB4 (5G2F8) 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), 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).

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.

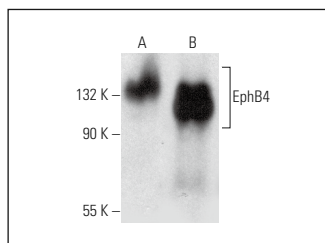
Molecular Weight of EphB4: 120 kDa.

Positive Controls: AN3 CA cell lysate: sc-24662, HT-1080 whole cell lysate: sc-364183 or PC-3 nuclear extract: sc-2152.

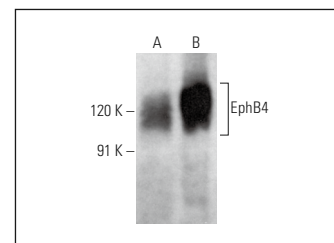
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



EphB4 (5G2F8): sc-130081. Western blot analysis of EphB4 expression in PC-3 nuclear extract (A) and AT-3 whole cell lysate (B).



EphB4 (5G2F8): sc-130081. Western blot analysis of EphB4 expression in HT-1080 whole cell lysate (A) and PC-3 nuclear extract (B).

SELECT PRODUCT CITATIONS

1. Wu, M., et al. 2016. Bradykinin receptors and EphB2/EphrinB2 pathway in response to high glucose-induced osteoblast dysfunction and hyperglycemia-induced bone deterioration in mice. *Int. J. Mol. Med.* 37: 565-574.
2. Li, Y., et al. 2017. Aberrant EPHB4 gene methylation and childhood acute lymphoblastic leukemia. *Oncol. Lett.* 14: 4433-4440.
3. Wang, P., et al. 2018. Shear stress promotes differentiation of stem cells from human exfoliated deciduous teeth into endothelial cells via the downstream pathway of VEGF-Notch signaling. *Int. J. Mol. Med.* 42: 1827-1836.
4. Scalia, P., et al. 2019. Identification of a novel EphB4 phosphodegron regulated by the autocrine IGFII/IRA axis in malignant mesothelioma. *Oncogene* 38: 5987-6001.
5. He, S., et al. 2021. Inhibition of laser induced rats choroidal neovascularization by intravitreal injection of sEphB4-HSA. *Ann. Transl. Med.* 9: 18.
6. Masaoutis, C., et al. 2021. Ephrin receptors (Ephs) expression in thymic epithelial tumors: prognostic implications and future therapeutic approaches. *Diagnostics* 11: 2265.
7. Chen, L., et al. 2023. Aberrant epithelial cell interaction promotes esophageal squamous-cell carcinoma development and progression. *Signal Transduct. Target. Ther.* 8: 453.

RESEARCH USE

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