

EphA4 (35): sc-135897

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., et al. 1994. Identification and cloning of Elf-1, a developmentally expressed ligand for the MEK-4 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.
5. Fox, G.M., et al. 1995. DNA cloning and tissue distribution of five human Eph-like receptor protein-tyrosine kinases. *Oncogene* 10: 897-905.
6. Valenzuela, D.M., et al. 1995. Identification of full length and truncated forms of Ehk-3, a novel member of the Eph receptor tyrosine kinase family. *Oncogene* 10: 1573-1580.
7. Bennett, B.D., et al. 1995. Molecular cloning of a ligand for the EPH-related receptor protein-tyrosine kinase Htk. *Proc. Natl. Acad. Sci. USA* 92: 1866-1870.

CHROMOSOMAL LOCATION

Genetic locus: EPHA4 (human) mapping to 2q36.1; EphA4 (mouse) mapping to 1 C4.

SOURCE

EphA4 (35) is a mouse monoclonal antibody raised against amino acids 279-472 of EphA4 of mouse origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 500 µl of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

RESEARCH USE

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

APPLICATIONS

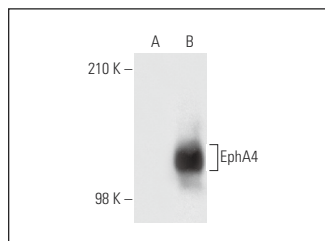
EphA4 (35) is recommended for detection of EphA4 of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for EphA4 siRNA (h): sc-39936, EphA4 siRNA (m): sc-39937, EphA4 shRNA Plasmid (h): sc-39936-SH, EphA4 shRNA Plasmid (m): sc-39937-SH, EphA4 shRNA (h) Lentiviral Particles: sc-39936-V and EphA4 shRNA (m) Lentiviral Particles: sc-39937-V.

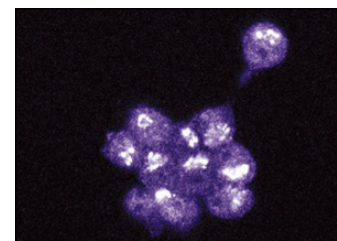
Molecular Weight of EphA4: 120 kDa.

Positive Controls: EphA4 (m2): 293T Lysate: sc-120067, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

DATA



EphA4 (35): sc-135897. Western blot analysis of EphA4 expression in non-transfected: sc-117752 (A) and mouse EphA4 transfected: sc-120067 (B) 293T whole cell lysates.



EphA4 (35): sc-135897. Immunofluorescence staining of PC-12 cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Vargas, L.M., et al. 2014. EphA4 activation of c-Abl mediates synaptic loss and LTP blockade caused by amyloid-β oligomers. *PLoS ONE* 9: e92309.
2. Wei, H.X., et al. 2023. Upregulation of EphA4 deteriorate brain damage by shifting microglia M1-polarization via NFκB signaling after focal cerebral ischemia in rats. *Heliyon* 9: e18429.

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.



See **EphA4 (D-4): sc-365503** for EphA4 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.