

# EphA4 (A-20): sc-922

## 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. 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 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.
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.

## CHROMOSOMAL LOCATION

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

## SOURCE

EphA4 (A-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of EphA4 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-922 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.

## APPLICATIONS

EphA4 (A-20) is recommended for detection of EphA4 of mouse, rat, human or chicken 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

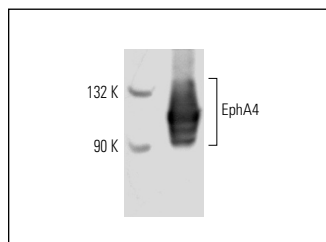
EphA4 (A-20) is also recommended for detection of EphA4 in additional species, including equine, canine, porcine and avian.

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: rat brain extract: sc-2392, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

## DATA



EphA4 (A-20): sc-922. Western blot analysis of EphA4 expression in rat brain tissue extract.

## SELECT PRODUCT CITATIONS

1. van Heumen, W.R., et al. 2000. Expression of EphA4 in developing inner ears of the mouse and guinea pig. *Hear. Res.* 139: 42-50.
2. Pickles, J.O., et al. 2002. Complementary and layered expression of Ephs and ephrins in developing mouse inner ear. *J. Comp. Neurol.* 449: 207-216.
3. Cruz-Orengo, L., et al. 2006. Blocking EphA4 upregulation after spinal cord injury results in enhanced chronic pain. *Exp. Neurol.* 202: 421-433.
4. Wang, L., et al. 2011. Anatomical coupling of sensory and motor nerve trajectory via axon tracking. *Neuron* 71: 263-277.

## RESEARCH USE

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



Try **EphA4 (D-4): sc-365503** or **EphA4 (35): sc-135897**, our highly recommended monoclonal alternatives to EphA4 (A-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **EphA4 (D-4): sc-365503**.