

EphA7 (H-55): sc-25459

BACKGROUND

The Eph subfamily represents the largest group of receptor protein tyrosine kinases identified to date. 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). EphAs are a family of receptor tyrosine kinases that are involved in axonal guidance during development. These receptors and their ligands, the ephrins, act via repulsive mechanisms to guide growing axons towards their appropriate targets and allow for the correct developmental connections to be made. Ligand binding to an Eph receptor results in tyrosine phosphorylation of the kinase domain, and repulsion of axonal growth cones and migrating cells. During neurulation, ephrin-A5 is coexpressed with its cognate receptor EphA7 in cells at the edges of the dorsal neural folds. Three different EphA7 splice variants, a full length form and two truncated versions lacking kinase domains, are expressed in the neural folds.

REFERENCES

- 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.
- Fox, G.M., et al. 1995. DNA cloning and tissue distribution of five human Eph-like receptor protein-tyrosine kinases. *Oncogene* 10: 897-905.
- 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.
- Holmberg, J., et al. 2000. Regulation of repulsion versus adhesion by different splice forms of an Eph receptor. *Nature* 408: 203-206.
- Online Mendelian Inheritance in Man, OMIM[™]. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 602190. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Willson, C.A., et al. 2002. Upregulation of EphA receptor expression in the injured adult rat spinal cord. *Cell Transplant.* 11: 229-239.

CHROMOSOMAL LOCATION

Genetic locus: EPHA7 (human) mapping to 6q16.1; EphA7 (mouse) mapping to 4 A4.

SOURCE

EphA7 (H-55) is a rabbit polyclonal antibody raised against amino acids 526-580 of EphA7 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.

STORAGE

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

APPLICATIONS

EphA7 (H-55) is recommended for detection of EphA7 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

EphA7 (H-55) is also recommended for detection of EphA7 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for EphA7 siRNA (h): sc-39941, EphA7 siRNA (m): sc-39942, EphA7 shRNA Plasmid (h): sc-39941-SH, EphA7 shRNA Plasmid (m): sc-39942-SH, EphA7 shRNA (h) Lentiviral Particles: sc-39941-V and EphA7 shRNA (m) Lentiviral Particles: sc-39942-V.

Molecular Weight (predicted) of EphA7: 112 kDa.

Molecular Weight (observed) of EphA7: 93 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HISM cell lysate: sc-2229 or A-10 cell lysate: sc-3806.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Wang, L.F., et al. 2008. Increased expression of EphA7 correlates with adverse outcome in primary and recurrent glioblastoma multiforme patients. *BMC Cancer* 8: 79.

RESEARCH USE

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

PROTOCOLS

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



Try **EphA7 (E-7): sc-393973** or **EphA7 (F-10): sc-393974**, our highly recommended monoclonal alternatives to EphA7 (H-55).