SANTA CRUZ BIOTECHNOLOGY, INC.

EphA7 (A-18): sc-1015

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: EPHA7 (human) mapping to 6q16.1; Epha7 (mouse) mapping to 4 A4.

SOURCE

EphA7 (A-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of EphA7 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1015 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EphA7 (A-18) 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), 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).

EphA7 (A-18) 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.

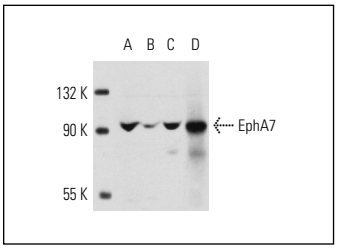
Molecular Weight (observed) of EphA7: 93 kDa.

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

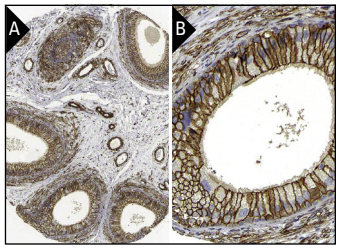
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



EphA7 (A-18): sc-1015. Western blot analysis of EphA7 expression in HISM (**A**), A-10 (**B**) and HeLa (**C**) whole cell lysates and rat small intestine tissue extract (**D**).



EphA7 (A-18): sc-1015. Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing membrane staining of glandular cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Hafner, C., et al. 2004. Differential gene expression of Eph receptors and ephrins in benign human tissues and cancers. Clin. Chem. 50: 490-499.
2. Cruz-Orengo, L., et al. 2006. Blocking EphA4 upregulation after spinal cord injury results in enhanced chronic pain. Exp. Neurol. 202: 421-433.
3. Cwiek, P., et al. 2015. RNA interference screening identifies a novel role for PCTK1/CDK16 in medulloblastoma with c-Myc amplification. Oncotarget 6: 116-129.

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.