

Eps15R (G-20): sc-323817

BACKGROUND

Elucidation of the mechanism by which receptor tyrosine kinases (RTKs) modulate cellular physiology in response to stimuli is critical to the understanding of growth regulation, as miscues in RTK signaling can result in cellular transformation events that may ultimately lead to cancer. Eps15 (EGF-receptor pathway substrate 15) is an EGF receptor substrate that become tyrosine phosphorylated subsequent to EGF stimulation. Over expression of Eps15 in NIH/3T3 cells causes cellular transformation, implying involvement of Eps15 in the regulation of cell proliferation. Eps15R (Eps15-related), also known as Eps15L1 (epidermal growth factor receptor substrate 15-like 1), is an 864 amino acid protein that contains one EF-hand domain and 3 EH domains. Localized to a variety of places within the cell, including the nucleus, cytoplasm and membrane-coated pits, Eps15R is thought to function as a component of clathrin-coated pits. Like Eps15, Eps15R may play an important role in receptor-mediated endocytosis.

REFERENCES

1. Reynolds, F.H., Jr., et al. 1981. Human transforming growth factors induces tyrosine phosphorylation of EGF receptors. *Nature* 292: 259-262.
2. Ciardiello, F., et al. 1991. Differential expression of epidermal growth factor-related proteins in human colorectal tumors. *Proc. Natl. Acad. Sci. USA* 88: 7792-7796.
3. Fazioli, F., et al. 1993. Eps8, a substrate for the epidermal growth factor receptor kinase, enhances EGF-dependent mitogenic signals. *EMBO J.* 12: 3799-3808.
4. Fazioli, F., et al. 1993. Eps15, a novel tyrosine kinase substrate, exhibits transforming activity. *Mol. Cell. Biol.* 13: 5814-5828.
5. Wong, W.T., et al. 1994. Evolutionary conservation of the EPS8 gene and its mapping to human chromosome 12q23-q24. *Oncogene* 9: 3057-3061.
6. Schumacher, C., et al. 1995. The SH3 domain of Crk binds specifically to a conserved proline-rich motif in Eps15 and Eps15R. *J. Biol. Chem.* 270: 15341-15347.
7. Castagnino, P., et al. 1995. Direct binding of Eps8 to the juxtamembrane domain of EGFR is phosphotyrosine- and SH2-independent. *Oncogene* 10: 723-729.

CHROMOSOMAL LOCATION

Genetic locus: EPS15L1 (human) mapping to 19p13.11; Eps15l1 (mouse) mapping to 8 B3.3.

SOURCE

Eps15R (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Eps15R 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-323817 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Eps15R (G-20) is recommended for detection of Eps15R of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with Eps15.

Eps15R (G-20) is also recommended for detection of Eps15R in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for Eps15R siRNA (h): sc-40507, Eps15R siRNA (m): sc-40508, Eps15R shRNA Plasmid (h): sc-40507-SH, Eps15R shRNA Plasmid (m): sc-40508-SH, Eps15R shRNA (h) Lentiviral Particles: sc-40507-V and Eps15R shRNA (m) Lentiviral Particles: sc-40508-V.

Molecular Weight of Eps15R isoforms: 125/108/76 kDa.

Positive Controls: Y79 cell lysate: sc-2240.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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