

# Eps15R (N-16): sc-130138

## 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. Overexpression 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 three 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. Carbone, R., et al. 1997. Eps15 and Eps15R are essential components of the endocytic pathway. *Cancer Res.* 57: 5498-5504.
2. Coda, L., et al. 1998. Eps15R is a tyrosine kinase substrate with characteristics of a docking protein possibly involved in coated pits-mediated internalization. *J. Biol. Chem.* 273: 3003-3012.
3. Rosenthal, J.A., et al. 1999. The epsins define a family of proteins that interact with components of the clathrin coat and contain a new protein module. *J. Biol. Chem.* 274: 33959-33965.
4. Doria, M., et al. 1999. The Eps15 homology (EH) domain-based interaction between Eps15 and hrb connects the molecular machinery of endocytosis to that of nucleocytoplasmic transport. *J. Cell Biol.* 147: 1379-1384.
5. Offenhäuser, N., et al. 2000. Differential patterns of expression of Eps15 and Eps15R during mouse embryogenesis. *Mech. Dev.* 95: 309-312.
6. Poupon, V., et al. 2002. Differential nucleocytoplasmic trafficking between the related endocytic proteins Eps15 and Eps15R. *J. Biol. Chem.* 277: 8941-8948.
7. Haglund, K., et al. 2002. Cbl-directed monoubiquitination of CIN85 is involved in regulation of ligand-induced degradation of EGF receptors. *Proc. Natl. Acad. Sci. USA* 99: 12191-12196.
8. Haglund, K., et al. 2005. Sprouty2 acts at the Cbl/CIN85 interface to inhibit epidermal growth factor receptor downregulation. *EMBO Rep.* 6: 635-641.
9. Schmid, E.M., et al. 2006. Role of the AP2  $\beta$ -appendage hub in recruiting partners for clathrin-coated vesicle assembly. *PLoS Biol.* 4: E262.

## CHROMOSOMAL LOCATION

Genetic locus: EPS15L1 (human) mapping to 19p13.11.

## STORAGE

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

## SOURCE

Eps15R (N-16) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of Eps15R of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Eps15R (N-16) is recommended for detection of Eps15R of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

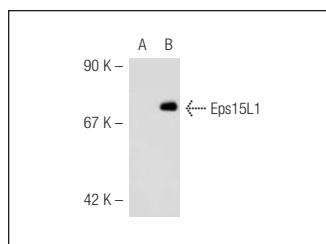
Molecular Weight of Eps15R isoforms: 125/108/76 kDa.

Positive Controls: Y79 cell lysate: sc-2240.

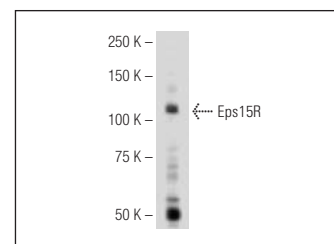
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use 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).

## DATA



Eps15R (N-16): sc-130138. Western blot analysis of Eps15L1 expression in non-transfected: sc-117752 (A) and human Eps15L1 transfected: sc-112842 (B) 293T whole cell lysates.



Eps15R (N-16): sc-130138. Western blot analysis of Eps15R expression in Y79 whole cell lysate.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.