

RUFY1 (H-125): sc-135381

BACKGROUND

RUFY1 (RUN and FYVE domain containing 1), also known as RABIP4 or ZFYVE12, is a 708 amino acid protein that localizes to the cytoplasm and the early endosome membrane. Highly expressed in testis, lung, brain and kidney, RUFY1 functions to bind phosphatidylinositol 3-phosphate-containing phospholipid vesicles and, via this interaction, participates in early endosomal trafficking. RUFY1 contains one RUN domain and one FYVE-type zinc finger through which it mediates its ability to bind phosphatidylinositol 3-phosphate. Upon DNA damage, RUFY1 may be phosphorylated by ATM or ATR. Additionally, the phosphorylation of Tyr 389 and/or Tyr 400 residues on human RUFY1 is thought to be necessary for endosomal localization. Three isoforms of RUFY1 exist due to alternative splicing events.

REFERENCES

1. Mari, M., et al. 2001. Role of the FYVE finger and the RUN domain for the subcellular localization of RABIP4. *J. Biol. Chem.* 276: 42501-42508.
2. Cormont, M., et al. 2001. A FYVE-finger-containing protein, RABIP4, is a Rab4 effector involved in early endosomal traffic. *Proc. Natl. Acad. Sci. USA* 98: 1637-1642.
3. Yang, J., et al. 2002. Interaction between tyrosine kinase Etk and a RUN domain- and FYVE domain-containing protein RUFY1. A possible role of ETK in regulation of vesicle trafficking. *J. Biol. Chem.* 277: 30219-30226.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610327. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Fouraux, M.A., et al. 2004. RABIP4' is an effector of Rab5 and Rab4 and regulates transport through early endosomes. *Mol. Biol. Cell* 15: 611-624.
6. Katoh, M., et al. 2004. Characterization of RUSC1 and RUSC2 genes in silico. *Oncol. Rep.* 12: 933-938.
7. Vukmirica, J., et al. 2006. The Rab4A effector protein RABIP4 is involved in migration of NIH/3T3 fibroblasts. *J. Biol. Chem.* 281: 36360-36368.

CHROMOSOMAL LOCATION

Genetic locus: RUFY1 (human) mapping to 5q35.3; Rufy1 (mouse) mapping to 11 B1.3.

SOURCE

RUFY1 (H-125) is a rabbit polyclonal antibody raised against amino acids 461-585 mapping within an internal region of RUFY1 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

RUFY1 (H-125) is recommended for detection of RUFY1 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).

RUFY1 (H-125) is also recommended for detection of RUFY1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for RUFY1 siRNA (h): sc-91860, RUFY1 siRNA (m): sc-153172, RUFY1 shRNA Plasmid (h): sc-91860-SH, RUFY1 shRNA Plasmid (m): sc-153172-SH, RUFY1 shRNA (h) Lentiviral Particles: sc-91860-V and RUFY1 shRNA (m) Lentiviral Particles: sc-153172-V.

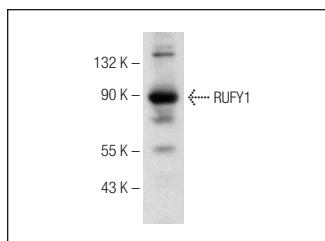
Molecular Weight of RUFY1: 80 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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.

DATA



RUFY1 (H-125): sc-135381. Western blot analysis of RUFY1 expression in HeLa whole cell lysate.

RESEARCH USE

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

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Try **RUFY1 (A-4): sc-398740** or **RUFY1 (SS-41): sc-100846**, our highly recommended monoclonal alternatives to RUFY1 (H-125).