

RUFY1 (P-15): sc-163326

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

- 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.
- Cormont, M., et al. 2001. A FYVE-finger-containing protein, Rabip4, is a Rab 4 effector involved in early endosomal traffic. *Proc. Natl. Acad. Sci. USA* 98: 1637-1642.
- 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.
- 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/>
- Fouraux, M.A., et al. 2004. Rabip4' is an effector of Rab 5 and Rab 4 and regulates transport through early endosomes. *Mol. Biol. Cell* 15: 611-624.
- Katoh, M. and Katoh, M. 2004. Characterization of RUSC1 and RUSC2 genes in silico. *Oncol. Rep.* 12: 933-938.

CHROMOSOMAL LOCATION

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

SOURCE

RUFY1 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide 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.

Blocking peptide available for competition studies, sc-163326 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

RUFY1 (P-15) 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), 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 RUFY2 or RUFY4.

RUFY1 (P-15) is also recommended for detection of RUFY1 in additional species, including equine, canine, bovine, porcine and avian.

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.

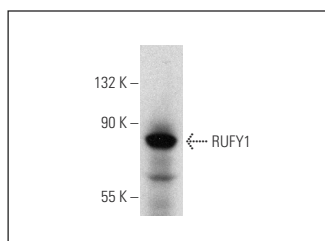
Molecular Weight of RUFY1 isoforms: 80 kDa.

Positive Controls: Rat brain extract: sc-2392 or HeLa whole cell lysate: sc-2200.

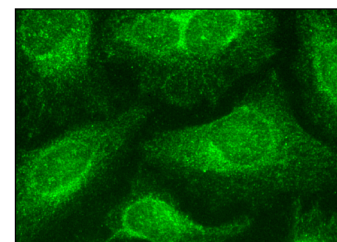
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



RUFY1 (P-15): sc-163326. Western blot analysis of RUFY1 expression in rat brain tissue extract.



RUFY1 (P-15): sc-163326. Immunofluorescence staining of formalin-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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

MONOS
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Try **RUFY1 (A-4): sc-398740** or **RUFY1 (SS-41): sc-100846**, our highly recommended monoclonal alternatives to RUFY1 (P-15).