SANTA CRUZ BIOTECHNOLOGY, INC.

RABIF (D-12): sc-390759

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies, all of which are thought to play an important role in either endocytosis or in biosynthetic protein transport. The process of transporting newly synthesized proteins from the endoplasmic reticulum (ER) to various stacks of the Golgi complex and to secretory vesicles involves the movement of carrier vesicles and requires Rab protein function. Rab proteins are also an integral part of endocytic pathways. RABIF (RAB interacting factor), also known as MSS4, RASGFR3 or RASGRF3, is a 123 amino acid ubiquitously expressed guanine-nucleotide-releasing protein that may participate in vesicular transport. RABIF stimulates GTP-GDP exchange in Sec4 and Rab and binds to a subset of genetically related Rab proteins.

REFERENCES

1. Burton, J.L., et al. 1994. Specific interactions of Mss4 with members of the Rab GTPase subfamily. EMBO J. 13: 5547-5558.
2. Miyazaki, A., et al. 1994. Comparison of kinetic properties between MSS4 and Rab3A GRF GDP/GTP exchange proteins. FEBS Lett. 350: 333-336.
3. Yu, H. and Schreiber, S.L. 1995. Cloning, Zn^{2+} binding, and structural characterization of the guanine nucleotide exchange factor human Mss4. Biochemistry 34: 9103-9110.
4. Yu, H. and Schreiber, S.L. 1995. Structure of guanine-nucleotide-exchange factor human Mss4 and identification of its Rab-interacting surface. Nature 376: 788-791.

CHROMOSOMAL LOCATION

Genetic locus: RABIF (human) mapping to 1q32.1.

SOURCE

RABIF (D-12) is a mouse monoclonal antibody raised against amino acids 1-123 representing full length RABIF of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RABIF (D-12) is available conjugated to agarose (sc-390759 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390759 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390759 PE), fluorescein (sc-390759 FITC), Alexa Fluor® 488 (sc-390759 AF488), Alexa Fluor® 546 (sc-390759 AF546), Alexa Fluor® 594 (sc-390759 AF594) or Alexa Fluor® 647 (sc-390759 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390759 AF680) or Alexa Fluor® 790 (sc-390759 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

RABIF (D-12) is recommended for detection of RABIF of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for RABIF siRNA (h): sc-88145, RABIF shRNA Plasmid (h): sc-88145-SH and RABIF shRNA (h) Lentiviral Particles: sc-88145-V.

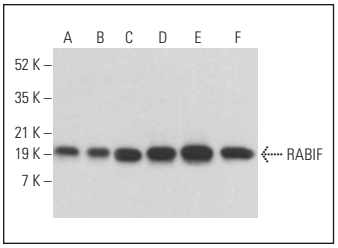
Molecular Weight of RABIF: 14 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or MIA PaCa-2 cell lysate: sc-2285.

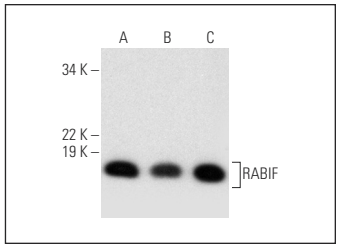
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



RABIF (D-12): sc-390759. Western blot analysis of RABIF expression in M1 (**A**), EOC 20 (**B**), BW5147 (**C**), WEHI-231 (**D**), c4 (**E**) and F9 (**F**) whole cell lysates.



RABIF (D-12): sc-390759. Western blot analysis of RABIF expression in MIA PaCa-2 (**A**), Hep G2 (**B**) and HeLa (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Jeng, E.E., et al. 2019. Systematic identification of host cell regulators of *Legionella pneumophila* pathogenesis using a genome-wide CRISPR screen. Cell Host Microbe 26: 551-563.
2. Moissoglu, K., et al. 2020. RNA localization and co-translational interactions control RAB13 GTPase function and cell migration. EMBO J. 39: e104958.

RESEARCH USE

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