

Rab 32 (B-4): sc-390178

BACKGROUND

Small GTP-binding proteins of the RAB family play essential roles in vesicle and granule targeting. Rab 32 is a 225 amino acid protein that belongs to the small GTPase superfamily and the Rab family. Rab 32 has an unusual GTP-binding sequence, DIAGQE, in place of the more common DTAGQE. Rab 32 acts as an A-kinase anchoring protein by binding to the type II regulatory subunit of protein kinase A and anchoring it to mitochondria. Also involved in synchronization of mitochondrial fission, Rab 32 is widely expressed with high levels in heart, liver, kidney, bone marrow, testis, colon and fetal lung. Rab 32 has been found to be frequently hypermethylated in microsatellite instability-high (MSI-H) colon cancers. Although Rab 32 methylation is rare in endometrial cancers, it is strongly associated with hMLH1 hypermethylation and MSI in gastric adenocarcinomas. The Rab 32 gene is conserved in chimpanzee, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito and *C. elegans*, and maps to human chromosome 6q24.3.

CHROMOSOMAL LOCATION

Genetic locus: Rab32 (mouse) mapping to 10 A1.

SOURCE

Rab 32 (B-4) is a mouse monoclonal antibody raised against amino acids 181-223 mapping at the C-terminus of Rab 32 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rab 32 (B-4) is available conjugated to agarose (sc-390178 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390178 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390178 PE), fluorescein (sc-390178 FITC), Alexa Fluor® 488 (sc-390178 AF488), Alexa Fluor® 546 (sc-390178 AF546), Alexa Fluor® 594 (sc-390178 AF594) or Alexa Fluor® 647 (sc-390178 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390178 AF680) or Alexa Fluor® 790 (sc-390178 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Rab 32 (B-4) is recommended for detection of Rab 32 of mouse 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 Rab 32 siRNA (m): sc-152636, Rab 32 shRNA Plasmid (m): sc-152636-SH and Rab 32 shRNA (m) Lentiviral Particles: sc-152636-V.

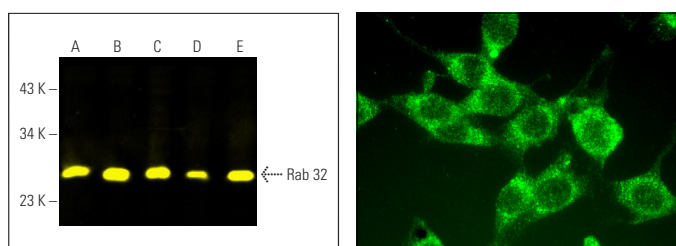
Molecular Weight of Rab 32: 25 kDa.

Positive Controls: LADMAC whole cell lysate: sc-364189, NIH/3T3 whole cell lysate: sc-2210 or 3T3-L1 cell lysate: sc-2243.

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



Rab 32 (B-4) Alexa Fluor® 488: sc-390178 AF488. Direct fluorescent western blot analysis of Rab 32 expression in NIH/3T3 (A), RAW 264.7 (B), 3T3-L1 (C), c4 (D) and LADMAC (E) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.

Rab 32 (B-4): sc-390178. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Hu, Z.Q., et al. 2019. Rab 32 GTPase, as a direct target of miR-30b/c, controls the intracellular survival of *Burkholderia pseudomallei* by regulating phagosome maturation. *PLoS Pathog.* 15: e1007879.
- Kalogeropoulou, A.F., et al. 2020. Endogenous Rab 29 does not impact basal or stimulated LRRK2 pathway activity. *Biochem. J.* 477: 4397-4423.
- Balci, A., et al. 2020. VARP and Rab9 are dispensable for the Rab32/BLOC-3 dependent *Salmonella* killing. *Front. Cell. Infect. Microbiol.* 10: 581024.
- Sherpa, R.T., et al. 2021. Mitochondrial A-kinase anchoring proteins in cardiac ventricular myocytes. *Physiol. Rep.* 9: e15015.
- Noda, K., et al. 2023. Characterization of Rab32- and Rab38-positive lysosome-related organelles in osteoclasts and macrophages. *J. Biol. Chem.* 299: 105191.
- Unapanta, A., et al. 2023. Endogenous Rab38 regulates LRRK2's membrane recruitment and substrate Rab phosphorylation in melanocytes. *J. Biol. Chem.* 299: 105192.

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.