

Rab 32 (V-14): sc-169089

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, cow, mouse, rat, chicken, zebrafish, fruit fly, mosquito and *C. elegans*, and maps to human chromosome 6q24.3.

REFERENCES

1. Bao, X., et al. 2002. Molecular cloning, bacterial expression and properties of Rab31 and Rab32. *Eur. J. Biochem.* 269: 259-271.
2. Alto, N.M., et al. 2002. Rab32 is an A-kinase anchoring protein and participates in mitochondrial dynamics. *J. Cell. Biol.* 158: 659-668.
3. Pereira-Leal, J.B., et al. 2003. Structural determinants of Rab and Rab Escort Protein interaction: Rab family motifs define a conserved binding surface. *Biochem. Biophys. Res. Commun.* 301: 92-97.
4. Mungall, A.J., et al. 2003. The DNA sequence and analysis of human chromosome 6. *Nature* 425: 805-811.

CHROMOSOMAL LOCATION

Genetic locus: RAB32 (human) mapping to 6q24.3.

SOURCE

Rab 32 (V-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rab 32 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-169089 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Rab 32 (V-14) is recommended for detection of Rab 32 of 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 other Rab family members.

Suitable for use as control antibody for Rab 32 siRNA (h): sc-95461, Rab 32 shRNA Plasmid (h): sc-95461-SH and Rab 32 shRNA (h) Lentiviral Particles: sc-95461-V.

Molecular Weight of Rab 32: 25 kDa.

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) 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.

RESEARCH USE

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



Try **Rab 32 (D-11): sc-377472** or **Rab 32 (B-11): sc-390206**, our highly recommended monoclonal alternatives to Rab 32 (V-14).