

Product Information

Anti-Rab32

produced in rabbit, affinity isolated antibody

Product Number **SAB4200086**

Product Description

Anti-Rab32 is produced in rabbit using as the immunogen a synthetic peptide corresponding to a fragment of human Rab32 (GeneID: 10981), conjugated to KLH. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Rab32 recognizes human Rab32. The antibody may be used in several immunochemical techniques including immunoblotting (~25 kDa) and immunofluorescence. Detection of the Rab32 band by immunoblotting is specifically inhibited by the immunizing peptide.

Rab32 is a member of the Rab family of small guanosine triphosphatases (GTPases). The Rab family belongs to the Ras superfamily of small GTPases. Rab GTPases are central regulators of membrane trafficking between the different subcellular compartments of the eukaryotic cell. Their regulatory capacity depends on their ability to cycle between the GDP-bound inactive and GTP-bound active states. Conversion from one state to the other is regulated by GDP/GTP exchange factors (GEFs), GDP dissociation inhibitors (GDIs) and GTPase-activating proteins (GAPs).

Activation of a Rab protein is coupled to its association with intracellular membranes, allowing it to recruit downstream effector proteins to the cytoplasmic surface of a subcellular compartment. Through their effector proteins, Rab GTPases regulate vesicle formation, actin- and tubulin-dependent vesicle movement, and membrane fusion. Rab proteins contain conserved regions involved in guanine-nucleotide binding, and hypervariable COOH-terminal domains with a cysteine motif implicated in subcellular targeting. Post-translational modification of the cysteine motif with one or two geranylgeranyl groups is essential for the membrane association and correct intracellular localization of Rab proteins. Each Rab protein shows a characteristic subcellular distribution. Therefore, antibodies to Rab proteins may serve as useful tools for studying subcellular localization and membrane organization.¹⁻⁴

Rab32 is expressed at relatively high levels in three cell types with highly specialized organelles, melanocytes, platelets, and mast cells. Rab32, together with Rab38, regulates trafficking of melanogenic enzymes to melanosomes in mammalian epidermal melanocytes.⁵⁻⁷ Rab32 was implicated in mitochondrial anchoring of PKA and mitochondrial dynamics.⁸ Rab32 was also found to be required for the formation of autophagic vacuoles.⁹

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at -20 °C. For continuous use, the product may be stored at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 1-2 µg/mL is recommended using whole extracts of human platelets.

Immunofluorescence: a working antibody concentration of 1-2 µg/mL is recommended using human HeLa cells.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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VS,ST,TD,KAA,PHC,MAM 05/19-1