

Product Information

Anti-Rabex-5 (N-terminal)

produced in rabbit, affinity isolated antibody

Product Number **R5405**

Product Description

Anti-Rabex-5 (N-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at N-terminal of human Rabex-5 (GeneID: 27342), with an added cysteine, conjugated to KLH.

The corresponding sequence differs by one amino acid in rat and mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Rabex-5 (N-terminal) recognizes human, rat, and mouse Rabex-5 (not yet tested in other species).

Applications include the detection of Rabex-5 by immunoblotting (~58 kDa) and immunofluorescence. Detection of the Rabex-5 band by immunoblotting is specifically inhibited with the immunizing peptide.

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). Rab GEFs promote the binding of GTP to Rab proteins, converting them to their active form and inducing their association with intracellular membranes.^{1,2} Rabex-5, the mammalian orthologue of yeast Vps9p, is a guanine nucleotide exchange factor (GEF) for Rab5, a small GTPase involved in the regulation of early endosome fusion and endocytosis.^{3,4}

Rabex-5 contains multiple functional domains, including a VPS9 domain that possesses the GEF activity, a ubiquitin-binding A20-like zinc finger (ZnF) domain, and a coiled-coil domain.⁵⁻⁷ Rabex-5 forms a tight complex with Rabaptin-5 that is essential for endocytic membrane fusion. The binding of Rabaptin-5 increases the GEF activity of Rabex-5 and stimulates the generation of the active GTP-bound form of membrane-associated Rab5.⁵ Rabex-5 knockout in mice results in early death and severe skin inflammation.⁸

Reagent

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

For continuous use, store 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 dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 2-5 µg/mL is recommended using whole extracts of mouse brain and human U87 cells.

Indirect Immunofluorescence: a working concentration of 5-10 µg/mL is recommended using rat NRK cells fixed and permeabilized with 4% paraformaldehyde, followed by 0.4% saponin.

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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