ProductInformation

ANTI-Rab 3A
Developed in Rabbit
Affinity Isolated Antibody

Product Number **R 2776**

Product Description

Anti-Rab 3A is developed in rabbit using a synthetic peptide corresponding to amino acids 1-18 (MASATDSRYGQKESSDQN) of the human rab 3A protein, with an additional C-terminal cysteine, conjugated to KLH as the immunogen. This sequence is completely conserved within the human, mouse and rat Rab 3A protein. This antibody is purified by affinity chromatography using immobilized immunogen.

Anti-Rab 3A recognizes Rab 3A (21 kDa) in immunoblots of rat brain and total cell protein extracts of the mouse cell line AtT20. This antibody also reacts with Rab 3A from dog, hamster and human and may be used for immunoprecipitation.

The directional transport of cargo between organelles along the secretory pathway occurs as vesicles from donor compartments fuse with the membrane of specific acceptor compartments. The Rab/Ypt family of proteins mediates this process.[1] Rab proteins are low molecular weight GTP-binding proteins that form the largest branch of the Ras superfamily of GTPases. Located on the cytoplasmic face of organelles and vesicles, recent evidence has shown that Rab proteins are involved in intracellular membrane fusion reactions.[2]

Three ubiquitous membrane proteins, SNAP-25, synaptobrevin and syntaxin form the core of membrane fusion machinery that interacts with the soluble proteins NSF and α-SNAP. Rab proteins, in conjunction with the core fusion machinery and munc-18, help to mediate vesicle docking and fusion. Over 40 Rab proteins have been described in mammals.[3] Rab 3A is abundant in presynaptic nerve terminals and is crucial in acrosomal exocytosis in human spermatozoa. Abnormal accumulation of Rab 3A in the cytoplasm of Purkinje cells has been reported in the prion protein-related Creutzfeldt-Jakob disease.[4]

Reagent

Anti-Rab 3A is supplied as 100 µg of affinity isolated antibody in phosphate buffered saline containing 1.0 mg/ml bovine serum albumin and 0.05% sodium azide as preservative.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling.

Storage/Stability

Store at –20 °C. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. 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

The recommended working dilution is 2 µg/ml for immunoblotting.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

References

1. Novick, P. and Zerial, M., Curr. Opin. Cell Biol., **9**, 496-504 (1997).
2. Geppert, M. and Sudhof, T.C., Annu. Rev. Neurosci., **21**, 75-95 (1998).
3. Novick, P. and Zerial, M., Curr. Opin. Cell. Biol., **9**, 496-504 (1997).
4. Ferrer, I. et al., Neuroscience, **97**, 715-726 (2000).

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