

Datasheet for 100-401-G35**RAB4 Antibody****Overview**

Description:	Anti-RAB4 (RABBIT) Antibody - 100-401-G35
Item No.:	100-401-G35
Size:	100 µL
Applications:	IF, IHC, WB
Reactivity:	Human, Mouse, Rat
Host Species:	Rabbit

Product Details**Background:**

Rab4 is a 25kDa member of the Rab family of small guanosine triphosphatases (GTPases), Ras superfamily. Rab GTPases are central regulators of membrane trafficking in the eukaryotic cell. Their regulatory capacity depends on their ability to cycle between the GDP-bound inactive and GTP-bound active states. This conversion 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 sub-cellular compartment. Through these 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 hyper-variable COOH-terminal domains with a cysteine motif implicated in sub-cellular 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 shows a characteristic sub-cellular distribution. In particular, over-expression of Rab4 causes a redistribution of receptors on plasma membrane versus endocytic compartments. The presence of excessive Rab4 leads to the accumulation of transferrin receptors in non-acidic, post-endosomal recycling vesicles considered an intermediate compartment between endosomes and plasma membranes. Rab4 also plays a role in the translocation of glucose transporter (Glu4) in adipocytes in response to insulin. Mediating the association of Rab4 with transferring receptor-containing early endosomes takes place through the geranylgeranyl groups at its carboxyl-terminus. Membrane association is also cell cycle dependent, as phosphorylation at its c-terminal cdc2 kinase consensus sequence in mitotic cells leads to dissociation of Rab4 into the cytosol.

Synonyms:	Oncogene Rab4, Rab4A, Ras related protein Rab-4A
Host Species:	Rabbit

Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	RAB4A
Reactivity:	Human, Mouse, Rat
Immunogen Type:	Conjugated Peptide
Immunogen:	Rab4 Antibody was produced from whole rabbit serum prepared by repeated immunizations raised against a C-terminal region synthetic peptide from human Rab4.
Purity/Specificity:	Anti-Rab4 Antibody was prepared from monospecific antiserum by delipidation and defibrination. A BLAST analysis was used to suggest cross-reactivity with Rab4 from Human, Mouse, and Rat based on 100% homology with the immunizing sequence. Cross-reactivity with Rab4 from other sources has not been determined. Cell Signaling, Neurobiology, Organelle Marker research.
Relevant Links:	• NCBI - NP_004569.2 • GenelD - 5867 • UniProtKB - P20338

Application Details

Tested Applications:	IF, IHC, WB
Application Note:	Anti-Rab4 Antibody is tested by WB, IHC, and IF microscopy. Expect a band approximately ~26kDa on specific lysates. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IHC:	1:100
WB:	1:1000-2000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	85 mg/mL by Refractometry
Buffer:	1X PBS, pH 7.4

Preservative: 0.09% (w/v) Sodium Azide

Stabilizer: 50% (v/v) Glycerol

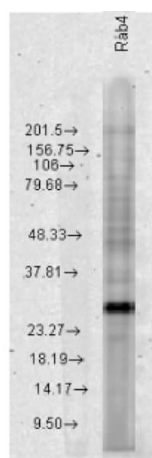
Shipping & Handling

Shipping Condition: Dry Ice

Storage Condition: Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Expiration: Expiration date is one (1) year from date of receipt.

Images



Western Blot

Western Blot of rabbit anti-Rab4 antibody. Lane 1: HeLa cell lysate. Primary antibody: Rab4 antibody at 1:1000 for overnight at 4°C. Secondary antibody: Goat anti-rabbit IgG HRP secondary antibody at 1:10,000 for 45 min at RT. Block: 5% Blotto overnight 4°C. Predicted/Observed size: 23.6 kDa/26kD. Other band(s): An additional protein of >100kDa is also detected. Additional cross-reactive bands are detected at ~75kDa and 50kDa in rat and mouse samples.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.