

## Product Datasheet

### Rab4 Antibody (APC) (orb151580)

**Catalog Number** orb151580

**Category** Antibodies

**Description** Rabbit polyclonal to Rab4 (APC). 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 (GEPs), 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(1). Rab proteins contain conserved regions involved in guanine-nucleotide binding, and hyper-variable COHO-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....

**Target** Rab4

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<b>Clonality</b>	Polyclonal
<b>Species/Host</b>	Rabbit
<b>Conjugation</b>	APC
<b>Reactivity</b>	Human, Mouse, Rat
<b>Concentration</b>	1 mg/ml
<b>Buffer/Preservatives</b>	95.46mM Phosphate, 2.48mM MES and 2mM EDTA
<b>Purification</b>	Peptide Affinity Purified
<b>Immunogen</b>	C-terminal peptide from human Rab4
<b>UniProt ID</b>	<b>P20338</b>
<b>MW</b>	26kDa
<b>Tested applications</b>	ICC, IF, IHC, WB
<b>Dilution range</b>	WB (1:1000), IHC (1:100), ICC/IF (1:150)
<b>Application notes</b>	A 1:1000 dilution was sufficient for detection of Rab4 in 10 µg of heat shocked HeLa cell lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.
<b>Specificity</b>	Detects ~26kDa.
<b>Storage</b>	Conjugated antibodies should be stored according to the product label
<b>Note</b>	For research use only
<b>Entrez</b>	<b>5867</b>
<b>NCBI</b>	<b>NP_004569.2</b>
<b>Expiration Date</b>	12 months from date of receipt.

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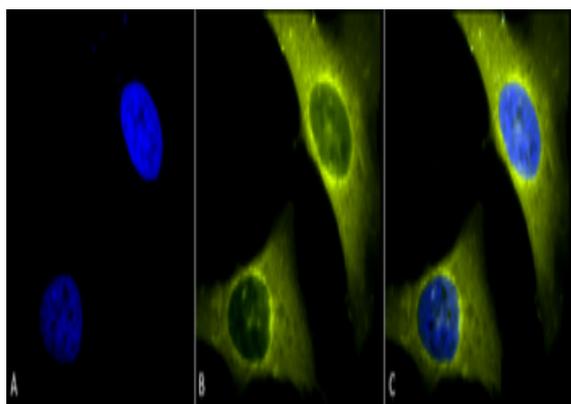
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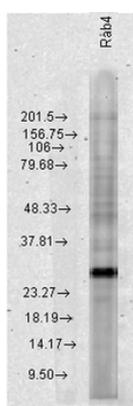
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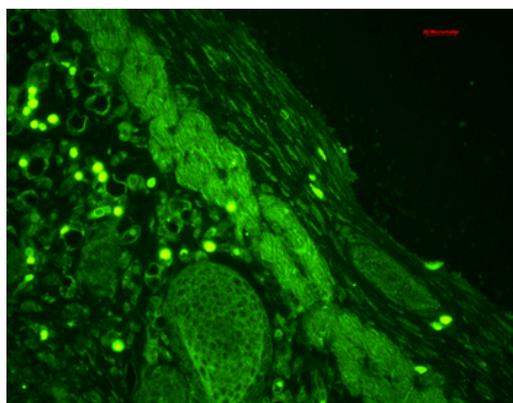
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Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Rab4 Polyclonal Antibody. Tissue: Heat Shocked Cervical cancer cell line (HeLa). Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-Rab4 Polyclonal Antibody at 1:150 for 12 hours at 4°C. Secondary Antibody: R-PE Goat Anti-Rabbit (yellow) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Membrane. Cytoplasm. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-Rab4 Antibody. (C) Composite. Heat Shocked at 42°C for 30 min.



Western blot analysis of Human Cervical cancer cell line (HeLa) lysate showing detection of Rab4 protein using Rabbit Anti-Rab4 Polyclonal Antibody. Load: 15 µgprotein. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Rabbit Anti-Rab4 Polyclonal Antibody at 1:1000 for 2 hours at RT. Secondary Antibody: Donkey Anti-Rabbit IgG: HRP for 1 hour at RT.



Immunohistochemistry analysis using Rabbit Anti-Rab4 Polyclonal Antibody. Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative Solution. Primary Antibody: Rabbit Anti-Rab4 Polyclonal Antibody at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:50 for 1 hour at RT. Localization: Epidermis (cell-cell border and cytoplasmic), hair follicles and muscle.

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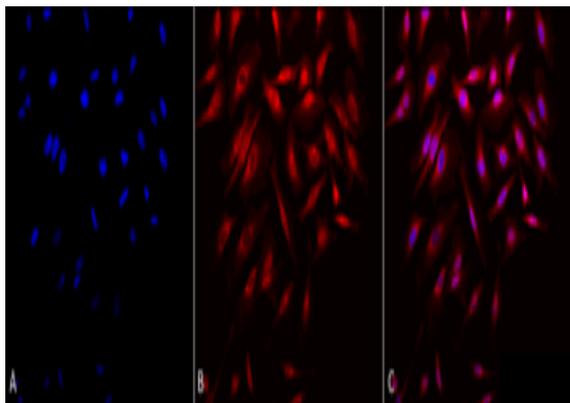
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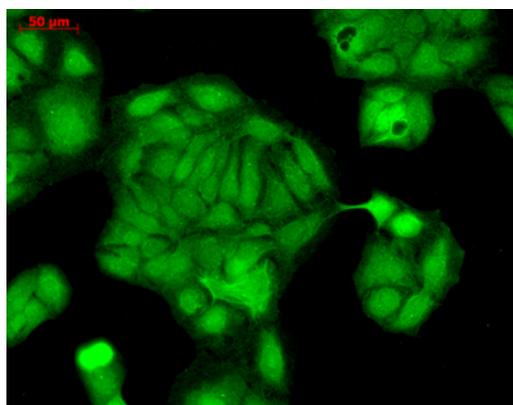
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Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Rab4 Polyclonal Antibody. Tissue: HaCaT cells. Species: Human. Fixation: Cold 100% methanol at -20°C for 10 minutes. Primary Antibody: Rabbit Anti-Rab4 Polyclonal Antibody at 1:100 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Rabbit at 1:50 for 1-2 hours at RT in dark. Localization: String nuclear and cytoplasmic staining.

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