

KD-Validated Anti-RAB10 Rabbit Monoclonal Antibody Rabbit monoclonal antibody Catalog # AGI2263

Specification

KD-Validated Anti-RAB10 Rabbit Monoclonal Antibody - Product Information

Application Primary Accession Reactivity Clonality Isotype Calculated MW Gene Name Aliases WB <u>P61026</u> Rat, Human, Mouse Monoclonal Rabbit IgG Predicted, 23 kDa; observed, 20 kDa KDa RAB10 RAB10; RAB10, Member RAS Oncogene Family; Ras-Related GTP-Binding Protein; Ras-Related Protein Rab-10; GTP-Binding Protein RAB10; EC 3.6.5.2 Recombinant protein of human RAB10

Immunogen

KD-Validated Anti-RAB10 Rabbit Monoclonal Antibody - Additional Information

Gene ID 10890 Other Names Ras-related protein Rab-10, 3.6.5.2, RAB10 (HGNC:9759)

KD-Validated Anti-RAB10 Rabbit Monoclonal Antibody - Protein Information

Name RAB10 (<u>HGNC:9759</u>)

Function

The small GTPases Rab are key regulators of intracellular membrane trafficking, from the formation of transport vesicles to their fusion with membranes (PubMed:21248164). Rabs cycle between an inactive GDP-bound form and an active GTP-bound form that is able to recruit to membranes different set of downstream effectors directly responsible for vesicle formation, movement, tethering and fusion (PubMed:21248164). That Rab is mainly involved in the biosynthetic transport of proteins from the Golgi to the plasma membrane (PubMed:21248164). Regulates, for instance, SLC2A4/GLUT4 glucose transporter-enriched vesicles delivery to the plasma membrane (By similarity). In parallel, it regulates the transport of TLR4, a toll- like receptor to the plasma membrane and therefore may be important for innate immune response (By similarity). Also plays a specific role in asymmetric protein transport to the plasma membrane (PubMed:16641372). In neurons, it is involved in axonogenesis through regulation of vesicular membrane trafficking toward the axonal plasma membrane (By similarity). In epithelial cells, it regulates transport from the Golgi to



the basolateral membrane (PubMed:16641372). May play a role in the basolateral recycling pathway and in phagosome maturation (By similarity). May play a role in endoplasmic reticulum dynamics and morphology controlling tubulation along microtubules and tubules fusion (PubMed:23263280). Together with LRRK2, RAB8A, and RILPL1, it regulates ciliogenesis (PubMed:30398148). When phosphorylated by LRRK2 on Thr-73, binds RILPL1 and inhibits ciliogenesis (PubMed:30398148). Participates in the export of a subset of neosynthesized proteins through a Rab8- Rab10-Rab11-dependent endososomal export route (PubMed:32344433). Targeted to and stabilized on stressed lysosomes through LRRK2 phosphorylation where it promotes the extracellular release of lysosomal content through EHBP1 and EHNP1L1 effector proteins (PubMed:30209220).

Cellular Location

Cytoplasmic vesicle membrane; Lipid-anchor; Cytoplasmic side. Golgi apparatus membrane. Golgi apparatus, trans-Golgi network membrane {ECO:0000250|UniProtKB:P24409}. Endosome membrane Recycling endosome membrane {ECO:0000250|UniProtKB:P24409}. Cytoplasmic vesicle, phagosome membrane {ECO:0000250|UniProtKB:P24409}. Cytoplasm, cytoskeleton, cilium basal body. Endoplasmic reticulum membrane. Cytoplasm, perinuclear region. Lysosome. Note=Associates with SLC2A4/GLUT4 storage vesicles (PubMed:22908308). Localizes to the base of the cilium when phosphorylated by LRRK2 on Thr-73 (PubMed:20576682, PubMed:30398148). Transiently associates with phagosomes (By similarity). Localizes to the endoplasmic reticulum at domains of new tubule growth (PubMed:23263280). Colocalizes with MICAL1, GRAF1/ARHGAP26 and GRAF2/ARHGAP10 on endosomal tubules (PubMed:30209220). {ECO:0000250|UniProtKB:P24409, ECO:0000269|PubMed:20576682, ECO:0000269|PubMed:22908308, ECO:0000269|PubMed:23263280,

ECO:0000269|PubMed:30209220, ECO:0000269|PubMed:30398148, ECO:0000269|PubMed:32344433}

Tissue Location

Expressed in the hippocampus (PubMed:29562525). Expressed in neutrophils (at protein level) (PubMed:29127255) Expressed in the testis (at protein level) (PubMed:28067790)

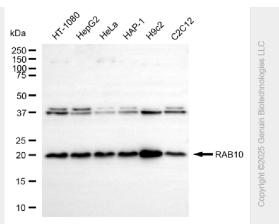
KD-Validated Anti-RAB10 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

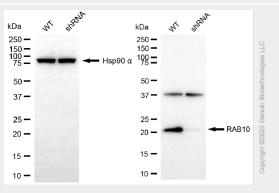
- Western Blot
- <u>Blocking Peptides</u>
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

KD-Validated Anti-RAB10 Rabbit Monoclonal Antibody - Images





Western blotting analysis using anti-RAB10 antibody (Cat#AGI2263). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-RAB10 antibody (Cat#AGI2263, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-RAB10 antibody (Cat#AGI2263). RAB10 expression in wild-type (WT) and RAB10 shRNA knockdown (KD) HeLa cells with 20 μ g of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-RAB10 antibody (Cat#AGI2263, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.