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Rab25 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1350a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P57735
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	3F12
Isotype	IgG1
Calculated MW	23496
Description	Members of the Ras-related superfamily of GTP binding proteins, which includes Ras, Rho, Rab and ARF subfamilies, exhibit 30-50% similarity with Ras p21. Rab proteins play an important role for either in endocytosis or in biosynthetic protein transport. The possibility that Rab proteins might also direct the exocytosis from secretory vesicles to the plasma membrane is supported by the observation that in yeast, the SEC4 protein, which is 40% similar to Rab proteins, is associated with secretory vesicles. Rab proteins located on the cytoplasmic face of organelles and vesicles, rab proteins are involved in intracellular membrane fusion reactions. Rab25 was cloned from a gastric parietal cell cDNA library and is expressed in epithelial tissues such as the gastrointestinal mucosae, kidney, and lung, which encoded a protein of 28 kDa.
Immunogen	Purified recombinant fragment of Rab25 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	57111
Other Names	Ras-related protein Rab-25, CATX-8, RAB25, CATX8
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Rab25 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RAB25 (HGNC:18238)
Synonyms	CATX8
Function	The small GTPases Rab are key regulators of intracellular membrane trafficking, from the formation of transport vesicles to their fusion with membranes. 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 (By similarity). RAB25 regulates epithelial cell differentiation, proliferation and survival, thereby playing key roles in tumorigenesis (PubMed:17925226). Promotes invasive migration of cells in which it functions to localize and maintain integrin alpha-V/beta-1 at the tips of extending pseudopodia (PubMed:17925226). Involved in the regulation of epithelial morphogenesis through the control of CLDN4 expression and localization at tight junctions (By similarity). May selectively regulate the apical recycling pathway (By similarity). Together with MYO5B regulates transcytosis (By similarity).
Cellular Location	Cell membrane; Lipid-anchor; Cytoplasmic side. Cytoplasmic vesicle. Cell projection, pseudopodium membrane. Note=Colocalizes with integrin alpha-V/beta-1 in vesicles at the pseudopodial tips. Colocalizes with RAB11A in subapical vesicles (By similarity). {ECO:0000250|UniProtKB:P46629, ECO:0000269|PubMed:17925226}
Tissue Location	Expression is restricted to epithelial cells (PubMed:15502842). Expressed in ovarian epithelium (NOE) and breast tissue. Expressed in ovarian cancer; expression is increased relative to NOE cells. Expression in ovarian cancer is stage dependent, with stage III and stage IV showing higher levels than early stage cancers Expressed in breast cancer; expression is increased relative to normal breast tissue.

References

1. JR Goldenring, KR Shen, HD Vaughan. et al. J. Biol. Chem,1993,268(25):18419-18422 2. Xiaoye W, Ravindra K, Jennifer N. et al. J. Biol. Chem,2000,275(37):29138-29146

Images

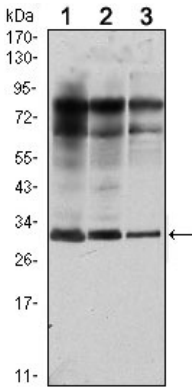
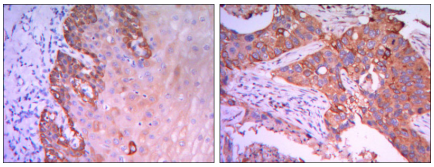


Figure 1: Western blot analysis using Rab25 mouse mAb against MCF-7 (1), T47D (2) and GC7901 (3) cell lysate.

Figure 2: Immunohistochemical analysis of paraffin-embedded esophagus tissues (left) and human



lung cancer (right) using Rab25 mouse mAb with DAB staining.

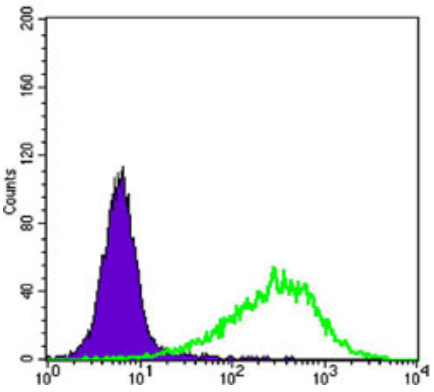


Figure 3: Flow cytometric analysis of NIH/3T3 cells using Rab25 mouse mAb (green) and negative control (purple).

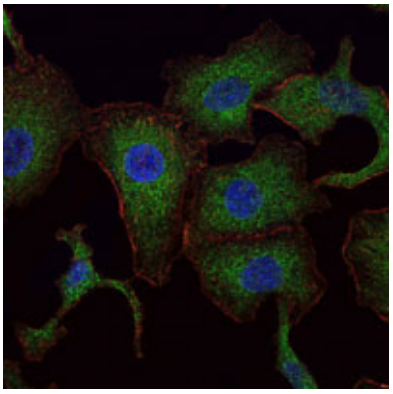


Figure 4: Immunofluorescence analysis of A549 cells using RAB25 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

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