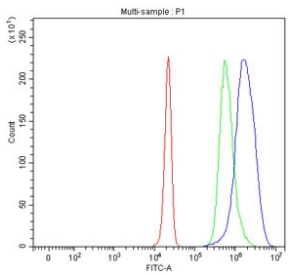
PIK3R4 Antibody / Phosphoinositide 3-kinase regulatory subunit 4 (RQ8775)

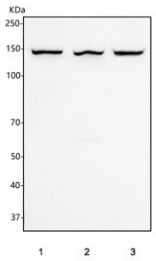
Catalog No.	Formulation	Size
RQ8775	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q99570
Applications	Western blot: 1-2ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This PIK3R4 antibody is available for research use only.



Flow cytometry testing of fixed and permeabilized human HepG2 cells with PIK3R4 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= PIK3R4 antibody.



Western blot testing of human 1) HeLa, 2) HepG2 and 3) 293T cell lysate with PIK3R4 antibody. Predicted molecular weight ~153 kDa.

Description

Phosphoinositide 3-kinase regulatory subunit 4, also known as PI3-kinase regulatory subunit 4 or PI3-kinase p150 subunit or phosphoinositide 3-kinase adaptor protein, or VPS15 is an enzyme that in humans is encoded by the PIK3R4 gene. The serine/threonine PI3 kinase regulatory subunit 4 (PIK3R4, Vps15) is the mammalian homologue of the yeast vacuolar protein sorting 15. PIK3R4 regulates the kinase activity of PI3K class III and anchors the kinase to cellular membranes through myristoylation. Recruitment of PI3K class III to the site of early endosome fusion and docking is directly mediated by PIK3R4 binding to the small GTPase Rab5 through its HEAT and WD-40 domains. The PIK3R4/PI3K class III plays a role in late endosome function through PIK3R4 binding to the Rab7 GTPase. In addition to its role in trafficking, the PIK3R4/PI3K class III complex interacts with beclin-1 to play a role during several stages of autophagy. Autophagosome formation is stimulated when Atg14 complexes with PIK3R4, PI3K class III, and beclin-1. The UVRAG protein competes with Atg14 for beclin-1 binding, forming a mutually exclusive complex with PIK3R4, PI3K class III, and beclin-1 that regulates autophagosome maturation. Autophagosome maturation is impaired in the presence of the beclin-1-binding protein Rubicon. Co-expression of PIK3R4 is required for PI3K class III activation and regulation by both beclin-1/UVRAG and by nutrients. Overexpression of PIK3R4 protein has been associated with decreased survival in patients with ovarian tumors, while mutations of the corresponding PIK3R4 gene are associated with metastatic melanoma, suggesting that PIK3R4 functions in cancer.

Application Notes

Optimal dilution of the PIK3R4 antibody should be determined by the researcher.

Immunogen

An E.coli-derived human recombinant protein (amino acids R36-Q1339) was used as the immunogen for the PIK3R4 antibody.

Storage

After reconstitution, the PIK3R4 Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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