Anti-PK3CB antibody

Description	Unconjugated Rabbit polyclonal to PK3CB

Model	STJ191945
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, WB
Gene ID	5291
Gene Symbol	PIK3CB
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	PK3CB Polyclonal Antibody detects endogenous levels of protein.
Tissue Specificity	Expressed ubiquitously.
Purification	PK3CB antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit beta isoform PI3-kinase subunit beta PI3K-beta PI3Kbeta PtdIns-3-kinase subunit beta Phosphatidylinositol 4,5-bisphosphate 3-kinase 110 kDa catalytic subunit be
Molecular Weight	117 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG

Formulation	Liquid form in PBS containing 50% glycerol,and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:8976OMIM:602925
Alternative Names	Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit beta isoform PI3-kinase subunit beta PI3K-beta PI3Kbeta PtdIns-3-kinase subunit beta Phosphatidylinositol 4,5-bisphosphate 3-kinase 110 kDa catalytic subunit be
Function	Phosphoinositide-3-kinase (PI3K) that phosphorylates PtdIns (Phosphatidylinositol), PtdIns4P (Phosphatidylinositol 4-phosphate) and PtdIns(4,5)P2 (Phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP3). PIP3 plays a key role by recruiting PH domain-containing proteins to the membrane, including AKT1 and PDPK1, activating signaling cascades involved in cell growth, survival, proliferation, motility and morphology. Involved in the activation of AKT1 upon stimulation by G-protein coupled receptors (GPCRs) ligands such as CXCL12, sphingosine 1-phosphate, and lysophosphatidic acid. May also act downstream receptor tyrosine kinases. Required in different signaling pathways for stable platelet adhesion and aggregation. Plays a role in platelet activation signaling triggered by GPCRs, alpha-IIb/beta-3 integrins (ITGA2B/ ITGB3) and ITAM (immunoreceptor tyrosine-based activation motif)-bearing receptors such as GP6. Regulates the strength of adhesion of ITGA2B/ ITGB3 activated receptors necessary for the cellular transmission of contractile forces. Required for platelet aggregation induced by F2 (thrombin) and thromboxane A2 (TXA2). Has a role in cell survival. May have a role in cell migration. Involved in the early stage of autophagosome formation. Modulates the intracellular level of PtdIns3P (Phosphatidylinositol 3-phosphate) and activates PIK3C3 kinase activity. May act as a scaffold, independently of its lipid kinase activity to positively regulate autophagy. May have a role in insulin signaling as scaffolding protein in which the lipid kinase activity is not required. May have a kinase-independent function in regulating cell proliferation and in clathrin-mediated endocytosis. Mediator of oncogenic signal in cell lines lacking PTEN. The lipid kinase activity is necessary for its role in oncogenic transformation. Required for the growth of ERBB2 and RAS driven tumors.
Sequence and Domain Family	The inhibitory interactions with PIK3R1 are mediated by the PI3K-ABD domain and the C2 PI3K-type domain with the iSH2 (inter-SH2) region of PIK3R1; the C2 PI3K-type domain, the PI3K helical domain, and the PI3K/PI4K kinase domain with the nSH2 (N-terminal SH2) region of PIK3R1; and the PI3K/PI4K kinase domain with the cSH2 (C-terminal SH2) region of PIK3R1. The inhibitory interaction between the PI3K-ABD domain and the C2 PI3K-type domain with the iSH2 (inter-SH2) region of PIK3R1 is weak. The nuclear localization signal (NLS) is required for its function in cell survival.
Cellular Localization	Cytoplasm Nucleus. Interaction with PIK3R2 is required for nuclear localization and export.
Post-translational Modifications	Phosphorylation at Ser-1070 down-regulates lipid kinase activity.

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