Anti-P3C2A antibody

Description	Unconjugated Rabbit polyclonal to P3C2A

Model	STJ191943
Host	Rabbit
Reactivity	Human, Mouse
Applications	ELISA, WB
Gene ID	5286
Gene Symbol	PIK3C2A
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	P3C2A Polyclonal Antibody detects endogenous levels of protein.
Tissue Specificity	Expressed in columnar and transitional epithelia, mononuclear cells, smooth muscle cells, and endothelial cells lining capillaries and small venules (at protein level). Ubiquitously expressed, with highest levels in heart, placenta and ovary, and lowest levels in the kidney. Detected at low levels in islets of Langerhans from type 2 diabetes mellitus individuals.
Purification	P3C2A antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Phosphatidylinositol 4-phosphate 3-kinase C2 domain-containing subunit alpha PI3K-C2-alpha PtdIns-3-kinase C2 subunit alpha Phosphoinositide 3-kinase-C2-alpha
Molecular Weight	185 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:8971OMIM:603601
Alternative Names	Phosphatidylinositol 4-phosphate 3-kinase C2 domain-containing subunit alpha PI3K-C2-alpha PtdIns-3-kinase C2 subunit alpha Phosphoinositide 3-kinase-C2-alpha
Function	Generates phosphatidylinositol 3-phosphate (PtdIns3P) and phosphatidylinositol 3,4-bisphosphate (PtdIns(3,4)P2) that act as second messengers. Has a role in several intracellular trafficking events. Functions in insulin signaling and secretion. Required for translocation of the glucose transporter SLC2A4/GLUT4 to the plasma membrane and glucose uptake in response to insulin-mediated RHOQ activation. Regulates insulin secretion through two different mechanisms: involved in glucose-induced insulin secretion downstream of insulin receptor in a pathway that involves AKT1 activation and TBC1D4/AS160 phosphorylation, and participates in the late step of insulin granule exocytosis probably in insulin granule fusion. Synthesizes PtdIns3P in response to insulin signaling. Functions in clathrin-coated endocytic vesicle formation and distribution. Regulates dynamin-independent endocytosis, probably by recruiting EEA1 to internalizing vesicles. In neurosecretory cells synthesizes PtdIns3P on large dense core vesicles. Participates in calcium induced contraction of vascular smooth muscle by regulating myosin light chain (MLC) phosphorylation through a mechanism involving Rho kinase-dependent phosphorylation of the MLCP-regulatory subunit MYPT1. May play a role in the EGF signaling cascade. May be involved in mitosis and UV-induced damage response. Required for maintenance of normal renal structure and function by supporting normal podocyte function.
Cellular Localization	Cell membrane Golgi apparatus Cytoplasmic vesicle, clathrin-coated vesicle Nucleus Cytoplasm. Inserts preferentially into membranes containing PtdIns(4,5)P2 . Associated with RNA-containing structures .
Post-translational Modifications	Phosphorylated upon insulin stimulation; which may lead to enzyme activation . Phosphorylated on Ser-259 during mitosis and upon UV irradiation; which does not change enzymatic activity but leads to proteasomal degradation. Ser-259 phosphorylation may be mediated by CDK1 or JNK, depending on the physiological state of the cell.