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Anti-PI3K p110 gamma Antibody

Catalog # AP53361

Product Information

Application	WB, IHC
Primary Accession	P48736
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	126454

Additional Information

Gene ID	5294
Other Names	Phosphatidylinositol 4, 5-bisphosphate 3-kinase catalytic subunit gamma isoform; PI3-kinase subunit gamma; PI3K-gamma; PI3Kgamma; PtdIns-3-kinase subunit gamma; Phosphatidylinositol 4, 5-bisphosphate 3-kinase 110 kDa catalytic subunit gamma; PtdIns-3-kinase subunit p110-gamma; p110gamma; Phosphoinositide-3-kinase catalytic gamma polypeptide; Serine/threonine protein kinase PIK3CG; p120-PI3K
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human PI3K p110 gamma. The exact sequence is proprietary.
Dilution	WB~~ 1:1000 IHC~~1:100~500
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	PIK3CG
Function	Phosphoinositide-3-kinase (PI3K) that phosphorylates 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. Links G protein coupled receptor activation to PIP3 production. Involved in immune, inflammatory and allergic responses. Modulates leukocyte chemotaxis to inflammatory sites and in response to chemoattractant agents. May control leukocyte polarization and migration by regulating the spatial accumulation of PIP3 and by regulating the organization of F-actin formation and integrin-based adhesion at the leading edge.

Controls motility of dendritic cells. Together with PIK3CD is involved in natural killer (NK) cell development and migration towards the sites of inflammation. Participates in T-lymphocyte migration. Regulates T- lymphocyte proliferation, activation, and cytokine production. Together with PIK3CD participates in T-lymphocyte development. Required for B- lymphocyte development and signaling. Together with PIK3CD participates in neutrophil respiratory burst. Together with PIK3CD is involved in neutrophil chemotaxis and extravasation. Together with PIK3CB promotes platelet aggregation and thrombosis. Regulates alpha-IIb/beta-3 integrins (ITGA2B/ ITGB3) adhesive function in platelets downstream of P2Y12 through a lipid kinase activity-independent mechanism. May have also a lipid kinase activity-dependent function in platelet aggregation. Involved in endothelial progenitor cell migration. Negative regulator of cardiac contractility. Modulates cardiac contractility by anchoring protein kinase A (PKA) and PDE3B activation, reducing cAMP levels. Regulates cardiac contractility also by promoting beta-adrenergic receptor internalization by binding to GRK2 and by non- muscle tropomyosin phosphorylation. Also has serine/threonine protein kinase activity: both lipid and protein kinase activities are required for beta-adrenergic receptor endocytosis. May also have a scaffolding role in modulating cardiac contractility. Contributes to cardiac hypertrophy under pathological stress. Through simultaneous binding of PDE3B to RAPGEF3 and PIK3R6 is assembled in a signaling complex in which the PI3K gamma complex is activated by RAPGEF3 and which is involved in angiogenesis. In neutrophils, participates in a phospholipase C-activating N-formyl peptide-activated GPCR (G protein-coupled receptor) signaling pathway downstream of RASGRP4-mediated Ras-activation, to promote neutrophil functional responses (By similarity).

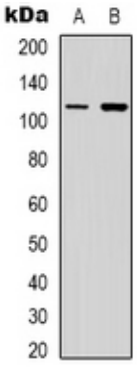
Cellular Location Cytoplasm. Cell membrane

Tissue Location Pancreas, skeletal muscle, liver and heart.

References

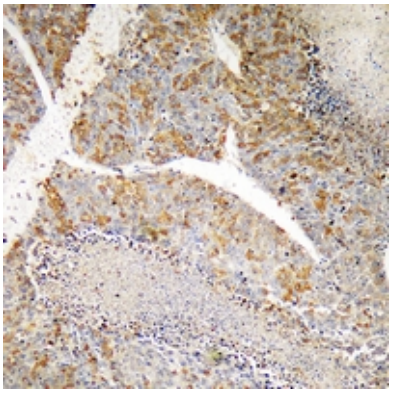
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Images



Western blot analysis of PI3K p110 gamma expression in Jurkat (A), NIHC3T3 (B) whole cell lysates. (Predicted band size: 126 kD; Observed band size: 110 kD)

Immunohistochemical analysis of PI3K p110 gamma staining in human liver cancer formalin fixed paraffin



embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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