

Recombinant Mouse Pik3cg Protein, Myc/DDK-tagged

Cat. No. Pik3cg-4864M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit gamma (Pik3cg), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	Phosphoinositide-3-kinase (PI3K) that phosphorylates PtdIns(4,5)P ₂ (Phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP ₃). PIP ₃ plays a key role by recruiting PH domain-containing proteins to the membrane, including AKT1 and PDK1, activating signaling cascades involved in cell growth, survival, proliferation, motility and morphology. Links G-protein coupled receptor activation to PIP ₃ 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 PIP ₃ 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 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

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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. Contribute 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.

Molecular Mass	126.8 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

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Gene Name	Pik3cg phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit gamma [Mus musculus (house mouse)]
Official Symbol	Pik3cg
Synonyms	PIK3CG; phosphoinositide-3-kinase, catalytic, gamma polypeptide; phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit gamma isoform; p120-PI3K; PI3K-gamma; PI3-kinase subunit gamma; ptdIns-3-kinase subunit gamma; ptdIns-3-kinase subunit p110-gamma; serine/threonine protein kinase PIK3CG; phosphatidylinositol-4,5-bisphosphate 3-kinase 110 kDa catalytic subunit gamma; PI3Kgamma; p110gamma; 5830428L06Rik
Gene ID	30955
mRNA Refseq	NM_001146201
Protein Refseq	NP_001139673
UniProt ID	Q9JHG7

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