Recombinant Human PIK3CB

Cat. No. PIK3CB-214H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant HumanPIK3CB expressed in*Sf9*was a glycosilated protein having a molecular weight as follows: p85α chain 83.5 kDa, p110β chain 124.3 kDa.
Species	Human
Source	Sf9 Cells
Description	The PI3KB isoform can be activated by insulin via the insulin receptor to initiate a cascade of events that control cell growth and metabolism. The activation of PI3KB is mediated by the p85 regulatory subunit binding to tyrosine phosphorylated insulin receptor substrate (IRS) proteins (e.g. IRS-1 and IRS-2). It was also shown that PI3Kb is involved in apoptosis in human colon carcinoma cells. Injection of neutralizing antibodies specific to p110b in WiDr, HCT116 and CO 115 adenocarcinoma cells inhibited de novo DNA synthesis. PI3KB is the major PI3K isoform required for apoptotic cell and Fc-g receptor mediated phagocytosis shown for primary mouse macrophages and the Jurkat human leukemia T cell line. It was shown by several research groups that the catalytic subunit of PI3KB can be activated by Gbg subunits of G-protein coupled receptors.
Physical Appearance	Sterile filtered liquid formualtion.
Formulation	0.5 mg/ml solution in 10mM Hepes, pH 7.5, 100mM NaCl, 2.5mM MgCl2, and 50% glycerol.
Biological Activity	~ 3 nmol/mg/min using phosphatidylinositol as the substrate.

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Purity	Greater than 90.0% as determined by SDS Page.
Stability	PI3Kb although stable at 4℃ for 1 week, should be stored desiccated below -18℃. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	PIK3CB phosphoinositide-3-kinase, catalytic, beta polypeptide [Homo sapiens]
Synonyms	PIK3CB; phosphoinositide-3-kinase, catalytic, beta polypeptide; PI3K; PIK3C1; P110BETA; PI3KBETA; MGC133043; DKFZp779K1237; PtdIns-3-kinase p110; PI3-kinase p110 subunit beta; Phosphatidylinositol-4, 5-bisphosphate 3-kinase; catalytic subunit beta isoform; EC 2.7.1.153; PI3-kinase p110 subunit beta; PtdIns-3-kinase p110; PI3Kbeta
Gene ID	5291
mRNA Refseq	NM_006219
Protein Refseq	NP_006210
MIM	602925
UniProt ID	P42338
Chromosome Location	3q21
Pathway	Acute myeloid leukemia; Apoptosis; B cell receptor signaling pathway; Chemokine signaling pathway; Chronic myeloid leukemia; Colorectal cancer; Endometrial cancer;

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	ErbB signaling pathway; Fc epsilon RI signaling pathway; Fc gamma R-mediated phagocytosis; Focal adhesion; Glioma; Inositol phosphate metabolism; Insulin signaling pathway; Jak-STAT signaling pathway; Leukocyte transendothelial migration; Melanoma; Natural killer cell mediated cytotoxicity; Neurotrophin signaling pathway; Non-small cell lung cancer; Pancreatic cancer; Pathways in cancer; Phosphatidylinositol signaling; Progesterone-mediated oocyte maturation; Prostate cancer; Regulation of actin cytoskeleton; Renal cell carcinoma; Small cell lung cancer; T cell receptor signaling pathway; Toll-like receptor signaling pathway; Type II diabetes mellitus; VEGF signaling pathway; mTOR signaling pathway
Function	1-phosphatidylinositol-3-kinase activity; ATP binding; inositol or phosphatidylinositol kinase activity; insulin receptor substrate binding; nucleotide binding; phosphatidylinositol-4,5-bisphosphate 3-kinase activity; phosphotransferase activity, alcohol group as acceptor; transferase activity

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