Active Recombinant Bovine PIK3CA

Cat. No. PIK3CA-208B **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Bovine PIK3CA is expressed in*Sf9 insect cells.*Phosphoinositide 3-kinase alpha is a glycosilated protein having a molecular weight as follows: p85a chain 83.5 kDa, p110 chain 124.3 kDa.
Species	Bovine
Source	Sf9 Cells
Description	PI3Ka plays a specific role in apoptosis in human colon cancer cells. Injection of neutralizing antibodies specific to PI3Ka into adenocarcinoma cells induced apoptosis, a response that was reverted by treating cells with caspase inhibitor. It was also shown that PI3Ka mediated phosphorylation of the p85a adapter reduces the lipid kinase activity of the heterodimer and this gives hints for PI3K-dependent signaling events not requiring production of 3'-phosphorylated phosphoinositides. PI3Ka is a key regulator of the initiation of keratinocyte differentiation. A decrease in PI3Ka activity results in a loss of keratinocyte adhesion to the extracellular membrane and the initiation of early phase differentiation.
Physical Appearance	Sterile filtered liquid formualtion.
Formulation	PI3Ka solution in 25mM HEPES, pH 8.0, 25mM NaCl, 2.5mM MgCl2 and 50% glycerol.
Stability	PI3Ka although stable at 14°C for 1 week, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

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	Please prevent freeze-thaw cycles.
Purity	Greater than 90.0% as determined by SDS-PAGE.
Activity	1,000 U/mg.
Unit Definition	1 unit is defined as 1 picomole phosphate transferred to PIP2 per minute.

GENE INFORMATION

Gene Name	PIK3CA phosphoinositide-3-kinase, catalytic, alpha polypeptide [Bos taurus]
Synonyms	PIK3CA; phosphoinositide-3-kinase, catalytic, alpha polypeptide; Phosphoinositide 3-kinase alpha p110a/p85a, PI3Ka, 2.7.1.137, Phosphatidylinositol 3-kinase, 1-phosphatidylinositol 3-kinase, PI3-kinase, PtdIns-3-kinase, Type I phosphatidylinositol kinase, Type III phosphoinositide 3-kinase; EC 2.7.1.153
Gene ID	282306
mRNA Refseq	NM_174574
Protein Refseq	NP_776999
UniProt ID	P32871
Pathway	Acute myeloid leukemia; Apoptosis; B cell receptor signaling pathway; Chemokine signaling pathway; Colorectal cancer; Endometrial cancer; Fc epsilon RI signaling pathway; Fc gamma R-mediated phagocytosis; Focal adhesion; Inositol phosphate metabolism; Insulin signaling pathway; Jak-STAT signaling pathway; Leukocyte transendothelial migration; Natural killer cell mediated cytotoxicity; Neurotrophin signaling pathway; Phosphatidylinositol signaling system; Progesterone-mediated

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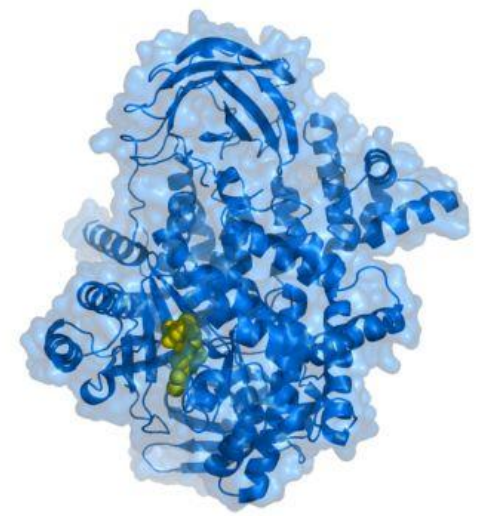
	oocyte maturation; Prostate cancer; Regulation of actin cytoskeleton; Small cell lung cancer; VEGF signaling pathway; mTOR signaling pathway
Function	1-phosphatidylinositol-3-kinase activity; ATP binding; inositol or phosphatidylinositol kinase activity; insulin receptor substrate binding; nucleotide binding; phosphatidylinositol-4,5-bisphosphate 3-kinase activity; phosphotransferase activity, alcohol group as acceptor; transferase activity
PI3 Kinase 110 alpha bound to the inhibitor PIK-93 (yellow).	

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