

Recombinant Bovine Phosphoinositide-3-Kinase, Catalytic, Alpha Polypeptide, His-tagged

Cat. No. PIK3CA-610B **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant Bovine PIK3CA was expressed in Sf9 insect cells with a G-terminal His-tag.

Species

Bovine

Source

Sf9 Cells

Description

The PIK3CA and regulatory subunits are co-expressed in Sf9 insect cells protein is a catalytically inactive mutant of PIK3CA in which Arg916 was mutated to Pro. This recombinant catalytically inactive protein can be used as a negative control in any kind of PI3Kα kinase activity studies. Recombinant full length PIK3CA and regulatory subunits are co-expressed in Sf9 insect cells mutant carries a N terminal GST-Tag and was purified by affinity chromatography. Human p110α differs from the bovine enzyme in only 2 positions, K532R and S535C. Both lie in the PIK domain of the enzyme (aa 525-696) and are not expected to interfere with binding of p85 (aa 31-108) or Ras (aa 173-292) or with catalytic function (aa 699-1064). Phosphoinositide 3-kinases (PIK3CA) phosphorylate phosphatidylinositols (PIs) at their 3' OH position generating lipid second messengers and thereby regulate numerous biological processes including cell growth, differentiation, survival, proliferation, migration and metabolism. On the basis of structural similarities and substrate specificity, the PI3K family can be subdivided into three classes termed I, II, and III.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Form	Liquid. Supplied in 10 mM HEPES pH 7.5 + 100 mM NaCl + 2.5 mM MgCl ₂ + 50% glycerol.
Purity	≥95% by SDS-PAGE.
Storage	Stored at -20°C. Avoid repeated freeze-thaw cycles.
Official Symbol	PIK3CA
GENE INFORMATION	
Gene Name	PIK3CA phosphoinositide-3-kinase, catalytic, alpha polypeptide [Bos taurus]
Synonyms	PIK3CA; phosphoinositide-3-kinase, catalytic, alpha polypeptide; phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha isoform; PI3K; PI3K alpha; p110 alpha; PI3K-alpha; ptdIns-3-kinase p110; PI3-kinase subunit alpha; PI3-kinase p110 subunit alpha; ptdIns-3-kinase subunit alpha; ptdIns-3-kinase subunit p110-alpha; serine/threonine protein kinase PIK3CA; phosphoinositide-3-kinase catalytic alpha polypeptide; phosphatidylinositol-4,5-bisphosphate 3-kinase 110 kDa catalytic subunit alpha; EC 2.7.1.153; EC 2.7.11.1; MGC142161; MGC142163; p110-alpha
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

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signaling pathway; Fc gamma R-mediated phagocytosis; Focal adhesion; Inositol phosphatemetabolism; Insulin signaling pathway; Jak-STAT signaling pathway; Leukocyte transendothelial migration; Natural killer cell mediated cytotoxicity; Neurotrophin 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; protein binding; protein kinase activator activity; protein serine/threonine kinase activity

PI3 Kinase 110
alpha bound to the
inhibitor PIK-93
(yellow).

