

Recombinant Human Phosphoinositide-3-kinase, Catalytic, Alpha Polypeptide, His-tagged

Cat. No. PIK3CA-1078H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full-length human p110 alpha (E545K) mutant subunit and human p85 alpha wild-type subunit were co-expressed by baculovirus in Sf9 insect cells using an N-terminal His tag on both proteins.
Species	Human
Source	Sf9 Cells
Description	The PIK3CA comprises of a 110 kDa catalytic subunit and a 85 kDa regulatory subunit. A number of isoforms of the 110 kDa catalytic subunit and the 85 kDa regulatory subunit exist in cells. The p110α catalytic subunit (PIK3CA) is frequently mutated or amplified in a variety of cancers including ovarian and colon and this protein is one of the PIK3CA mutants. PIK3CA gene copy number is increased in over 30% of ovarian cancers and this leads to increased PI3-kinase activity. Furthermore, the activity of p110α is essential for vascular development and inactivation of p110α leads to severe defects in angiogenic sprouting and vascular remodeling.
Applications	Kinase Assay; Western Blot
Molecular Weight	111 kDa (p110α), 86 kDa (p85α)
Expression System	Sf9 insect cells using baculovirus

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Form	Recombinant protein stored in 50mM sodium phosphate, pH 7.0, 300mM NaCl, 150 mM imidazole, 0.1 mM PMSF, 0.25 mM DTT, 25% glycerol.
Specific Activity	50 nmol/min/mg
Purity	> 70 %
Concentration	0.1 ug/ul
Sequences	Full-length
Storage	Store product at –70oC. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.
Pathways	3-phosphoinositide biosynthesis; Acute myeloid leukemia; Acute myeloid leukemia; Adaptive Immunity Signaling; B cell receptor signaling pathway; Bacterial invasion of epithelial cells; CDC42 signaling events; Downstream signaling of activated FGFR; EPHA2 forward signaling; FGF signaling pathway; HTLV-I infection; IL23-mediated signaling events; Inositol phosphate metabolism; Jak-STAT signaling pathway; Non-small cell lung cancer

GENE INFORMATION

Gene Name	PIK3CA phosphoinositide-3-kinase, catalytic, alpha polypeptide [Homo sapiens]
Official Symbol	PIK3CA
Synonyms	PIK3CA; phosphoinositide-3-kinase, catalytic, alpha polypeptide; PI3K; MGC142161; MGC142163; p110-alpha; phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha isoform; PI3K-alpha; OTTHUMP00000211945; PtdIns-3-kinase p110;

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PI3-kinase subunit alpha; PI3-kinase p110 subunit alpha; ptdIns-3-kinase subunit alpha; ptdIns-3-kinase subunit p110-alpha; phosphatidylinositol 3-kinase, catalytic, 110-KD, alpha; phosphatidylinositol 3-kinase, catalytic, alpha polypeptide; phosphatidylinositol-4,5-bisphosphate 3-kinase 110 kDa catalytic subunit alpha; phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit, alpha isoform

Gene ID [5290](#)

mRNA Refseq [NM_006218](#)

Protein Refseq [NP_006209](#)

MIM [171834](#)

UniProt ID [P42336](#)

Chromosome Location [3q26.3](#)

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; protein binding; protein serine/threonine kinase activity

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

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