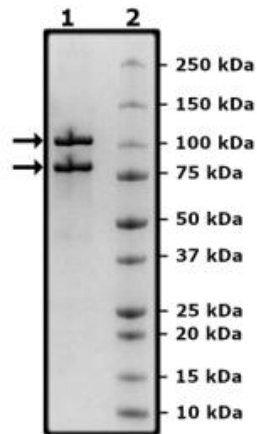


Product Information

Description:	Recombinant human PI3 Kinase complex of p110 α , with an H1047L mutation, and p85 α variant 1. Subunit p110 α encompasses amino acids 2-1068(end), and an N-terminal FLAG tag. Subunit p85 α encompasses amino acids 1-724(end). The two constructs were expressed together, and the complex was affinity purified.
Background:	PI3 (phosphoinositide 3) kinases, or phosphatidylinositol 3 kinases, are a family of proteins that can be subdivided into four classes: I, II, III and IV. Class I is involved in converting PI (4, 5) P2 (phosphatidylinositol (4, 5)-biphosphate) into PI (3, 4, 5) P3 (phosphatidylinositol (3, 4, 5)-triphosphate) when activated by tyrosine kinase receptors and G-protein coupled receptors. They are heterodimeric proteins with a regulatory and a catalytic subunit. The heterodimer between p110 (catalytic subunit) and p85 (regulatory subunit) belongs to class IA. P110 and p85 have three variants each. P110 α is ubiquitously expressed, and p85 α is the most abundant variant of p85. Class I PI3K participates in cell signaling, mostly via the activation of PKB (protein kinase B) and the PI3K/AKT/mTOR pathway. Dysfunction of these kinases impacts cell growth and differentiation, and mutations in p110 α have been linked to cancer. At least three isoform-specific inhibitors are approved by FDA for the treatment of lymphoma and leukemia. Further studies will help identify more selective inhibitors with a good tolerance that can bypass the development of drug resistance.
Species:	Human
Construct:	p110 α (H1047L) (FLAG-2-1068(end)) / p85 α (1-724(end))
Mutation:	p110 α : H1047L
Concentration:	0.93 mg/ml
Expression System:	Sf9
Purity:	$\geq 90\%$
Format:	Aqueous buffer solution.
Formulated In:	25 mM Tris-HCl, pH 8.0, 69 mM NaCl, 1.35 mM KCl, 0.025% Tween-20, 50% glycerol, and 3 mM DTT
MW:	p110 α : 125 kDa; p85 α : 84 kDa
Genbank Accession:	p110 α : NM_006218; p85 α : NM_181523
Stability:	At least 6 months at -80°C.
Storage:	-80°C
Instructions for Use:	Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles.
Assay Conditions:	Assay was done according to Chemi-Verse™ PI3 Kinase p110 α (H1047L)/p85 α Kinase Assay Kit (BPS Bioscience #82120) with various concentrations of PI3 Kinase p110 α (H1047L)/p85 α .
Applications:	Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

Quality Control Data

4-20% SDS-PAGE Coomassie Staining



PI3 Kinase p110 α (H1047L)/p85 α Activity

