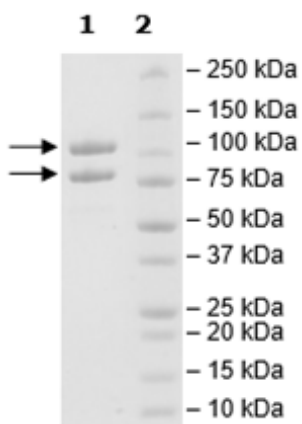


Product Information

Description:	Complex of human PI3 kinase p110 β , full-length, and human p85 α , full length. The p110 β construct contains an N-terminal FLAG-tag whereas p85 α has no tag. The two recombinant proteins were co-expressed and affinity purified as a complex.
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. 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:	PI3 kinase (p110 β (FLAG-2-1070(end)) / p85 α (1-724(end)))
Concentration:	0.24 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, 3 mM DTT, 0.05 mg/ml FLAG peptide, and 50% Glycerol
MW:	p110 β : 124 kDa; p85 α : 84 kDa
Genbank Accession:	p110 β : NM_006219; 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.
Specific Activity:	250 pmole/min/ μ g
Assay Conditions:	Assay was done in Kinase Buffer using 200 μ M PI-3 Kinase Lipid Substrate (BPS Bioscience #40560) and 100 μ M ATP. Reaction was done for 16 minutes at 30°C then developed using ADP-Glo™ Kinase Assay (Promega #V6930).
Applications:	Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

Quality Control Data

4-20% SDS-PAGE Coomassie Staining



PI3 kinase (p110β/p85α) Activity

