# PI3 Kinase p110α (E542K)/p85α, FLAG-Tag Recombinant

Catalog: 101913
Lot: 230808

## Product Information

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|---|---|
| **Description:** | Recombinant human PI3 Kinase complex of p110α, with an E542K mutation, and p85α variant 1. Subunit p110α encompasses amino acids 2-1068(end), and an N-terminal FLAG tag. Subunit p85α 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. P110α is ubiquitously expressed, and p85α 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 p110α 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:** | p110α (E542K) (FLAG-2-1068(end)) / p85α (1-724(end)) |
| **Mutation:** | p110α: E542K |
| **Concentration:** | 1.54 mg/ml |
| **Expression System:** | Sf9 |
| **Purity:** | ≥90% |
| **Format:** | Aqueous buffer solution. |
| **Formulated In:** | 25 mM Tris-HCl, pH 8.0, 69 mM NaCl, 1.3 mM KCl, 0.025% Tween-20, 50% glycerol, and 3 mM DTT |
| **MW:** | p110α: 125 kDa; p85α: 84 kDa |
| **Genbank Accession:** | p110α: NM_006218; p85α: 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 p110α (E542K)/p85α Kinase Assay Kit (BPS Bioscience #82113) with various concentrations of PI3 Kinase p110α (E542K)/p85α. |
| **Applications:** | Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling. |

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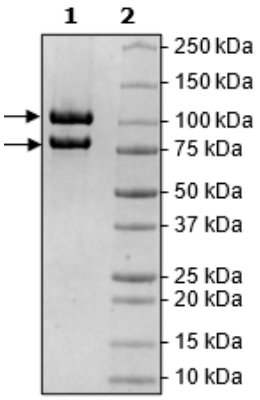
## Quality Control Data

4-20% SDS-PAGE Coomassie Staining




p110α (E542K)/p85α Activity