

Recombinant PI3K α (G106V) / p85 Complex

Catalog No: 82179, 82779

Expressed In: Baculovirus

Quantity: 20, 1000 μ g

Source: Human

Buffer Contents: Recombinant PI3K α (G106V) / p85 Complex is supplied in 25 mM HEPES pH 7.5, 300 mM NaCl, 20% glycerol, 0.04% Triton X-100, 0.5 mM TCEP.

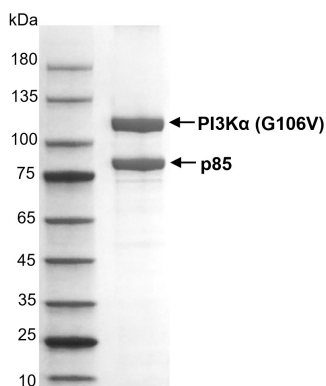
Background: Phosphoinositide 3-kinase (PI3K) family of lipid kinases are divided into three major classes based on primary sequence, substrate preference, and regulation. While class IA PI3Ks are heterodimeric enzymes composed of a catalytic subunit (p110a, p110b, or p110d) complexed with one of five regulatory subunits (p85a, p55a, p50a, p85b, or p55g), the class IB enzyme is a dimer made of p110g catalytic subunit and p101 or p84 regulatory subunit. The class I catalytic subunit polypeptides p110a, p110b, p110d, and p110g are encoded by PIK3CA, PIK3CB, PIK3CD, and PIK3CG, respectively. The regulatory subunits are encoded by five genes: PIK3R1 codes p85a, p55a, and p50a; PIK3R2 codes p85b; PIK3R3 codes p55g; PIK3R5 codes p101; and PIK3R6 codes p84. PI3K is a lipid and protein kinase that can be activated by receptor tyrosine kinases, cytokine receptors, chemokine G protein-coupled receptors, or oncogenes, including RAS. PI3K converts phosphatidylinositol 4,5-bisphosphate (PIP2) to phosphatidylinositol-3,4,5-triphosphate (PIP3), which leads to activation of pyruvate dehydrogenase kinase 1 (PDK1) and the serine/threonine kinase AKT (PKB) (7). AKT has many downstream effectors, which regulate the cell cycle, apoptosis, protein translation, autophagy, and metabolism. Most cytokines and RTK ligands signal through class IA PI3K.

Protein Details: Recombinant PI3K α (G106V) / p85 Complex that includes full length human PI3K α protein (with a G106V mutation, accession number NP_006209.2) with an N-terminal FLAG tag and full length human p85 protein (accession number NP_852664.1) without tag was expressed in Hi5 cells. The molecular weights of PI3K α (G106V) and p85 are 125.6 kDa and 83.6 kDa, respectively.

Application Notes: This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for this product is shown.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

PI3K α (G106V) / p85 Complex



Recombinant PI3K α (G106V) / p85 protein gel

10% SDS-PAGE gel

MW: PI3K α (G106V): 125.6 kDa

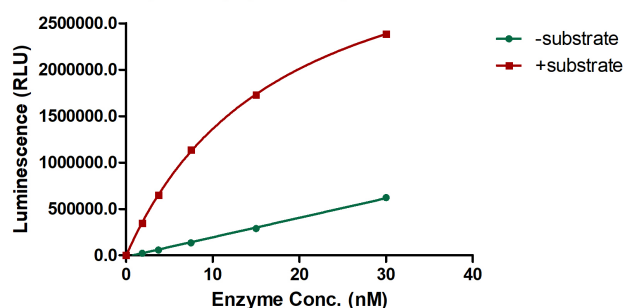
p85: 83.6 kDa

Purity: >90%

ADP-Glo assay for PI3K α (G106V) / p85 Complex activity

0.125 μ g/ μ l PI-3 Kinase Lipid Substrate was incubated with different concentrations of PI3K α (G106V) / p85 Complex protein in a 10 μ l reaction system containing 40 mM Tris-HCl pH 7.4, 20 mM MgCl₂, 50 μ M DTT, 0.1 mg/ml BSA and 100 μ M ATP for 1 hour, then add 10 μ l ADP-Glo Reagent at RT for 60min. Then add 20 μ l Kinase Detection Reagent incubates at RT for 60min. All the operations and reactions were performed at RT. Finally, Luminescence measurement is collected by BMG

PI3K α (G106V) / p85 Complex Titration



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PI3K α (G106V) / p85 Complex Titration

