

Product datasheet

Recombinant human PI 3 Kinase p110 alpha + PI 3 kinase p85 alpha protein ab196098

2 Images

Description

Product name	Recombinant human PI 3 Kinase p110 alpha + PI 3 kinase p85 alpha protein
Biological activity	<p>Specific activity: 880 pmol/min/μg.</p> <p>A unit of ab196098 kinase activity is defined as the amount of enzyme required to produce 1 pmol of Phosphoinositol-3, 4,5-Trisphosphate/min at 37°C.</p> <p>A 25 μl kinase reaction is conducted in a buffer containing 40 mM Tris-HCl (pH 7.4), 20 mM MgCl₂, 100 μM ATP, 200 μM PI:PS substrate and ab196098 for 15 min at 30°C.</p>
Purity	>= 52 % SDS-PAGE.
Expression system	Baculovirus infected Sf9 cells
Accession	P27986 P42336
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Amino Acid Sequence 1	
Species	Human
Sequence	<pre>MSAEGYQYRALYDYKKEREEDIDLHLGDILTVNKGSLVALG FSDGQEARP EEIGWLNQYNETTGERGDFPGTYVEYGRKKISPPTPKPRP PRPLPVAPG SSKTEADVQQALTLPDLAEQFAPPDIAPLLIKLVEAIEK KGLECSTLY RTQSSSNLAELRQLLDCTPSVDLEIMDVHVLADAFKRYL LDLPNPVIPA AVYSEMISLAPEVQSSEEYIQLLKKLIRSPSIPHQYWLTLQY LLKHFFKL SQTSSKNLLNARVLSEIFSPMLFRFSAASSDNTENLIKVIEI LISTEWNE RQPAPALPPKPPKPTTVANNGMNNMNSLQDAEWYWGDI SREEVNEKLRDT</pre>

ADGTFLVRDASTKMHGDYTLTLRKGGNNKLIKIFHRDGKYG
 FSDPLTFSS
 VVELINHYRNESLAQYNPKLDVKLLYPVSKYQQDQVVKED
 NIEAVGKKLH
 EYNTQFQEKSREYDRLYEEYTRTSQEIQMKRTAIEAFNETIK
 IFEEQCQT
 QERYSKEYIEKFKREGNEKEIQRIMHNYDKLKSRISEIIDSRR
 RLEEDLK
 KQAAEYREIDKRMNSIKPDLIQLRKTRDQYLMWLTQKGVR
 QKKLNEWLGN
 ENTEDQYSLVEDDEDLPHHDEKTNVVGSSNRNKAENLL
 RGKRDGTFLVRE
 SSKQGCYACSVVVDGEVKHCVINKTATGYGFAEPYNLYS
 SLKELVLHYQH TSLVQHNDSLNTLAYPVYAQQRR

Predicted molecular weight 84 kDa
Amino acids 1 to 724
Amino Acid Sequence 2
Species Human
Sequence

MPPRPSSGELWGIHLMPPRILVECLLPNGMIVTLECLREAT
 LITIKHELF
 KEARKYPLHQLLQDESSYFVSVTQEAEREFFDETTRRLC
 DLRLFQPFLK
 VIEPVGNNREEKILNREIGFAIGMPVCEFDVMKDPEVQDFR
 RNILNVCKEA
 VDRLDLNSPHSRAMYVPPNVESSPELPHIMNKLDKGGII
 VVIWVMSP
 NNDKQKYTLKINHDCVPEQVIAEAIKTRSMILLSSEQLKL
 CVLEYQGKY
 ILKVCGCDEYFLEKYPLSQYKIRSCIMLGRMPNLMLMAKE
 SLYSQLPMD
 CFTMPSYSRRISTATPYMNGETSTKSLWVINSALRIKILCAT
 YVNVNIRD
 IDKIYVRTGMYHGGEPLCDNVNTQRVPCSNPRWNEWLNIDI
 YIPDLPRAA
 RLCLSICSVKGRKGAKEEHCLAWGNINLFDYDTLVS GK
 MALNLWPVPH
 GLEDLLNPIGVTGSPNPKETPCLELEFDWFSSVVKFPDM
 SVIEEHANWSV
 SREAGFSYSHAGLSNRLARDNELRENDKEQLKAISTRDPL
 SEITEQEKDF
 LWSHRHYCVTIPEILPKLLSVKWNRSRDEVAQMYCLVKDW
 PPIKPEQAME
 LLDCNYPDPMVRGFAVRCLEKYL TDDKLSQYLIQLVQVLK
 YEQYLDNLLV
 RFLKAL TNQRIGHFFFWHLKSEMHNKTVSQRFGLLLES
 YCRACGMYLK
 HLNQVEAMEKLINLTDILKQEKKDETQKVQMKFLVEQMR
 RPDFMDALQG
 FLSPLNPAHQGLNLRLEECRIMSSAKRPLWLNWENPDIMS
 ELLFQNEII

FKNGDDLQRDMLTLQIIRIMENIWQNQGLDLRMLPYGCLSI
GDCVGLIEV
VRNSHTIMQIQCKGGLK GALQFN SHTLHQWLKDKNKGEIY
DAAIDLFTRS
CAGYCVATFILGIDRHSNIMVKDDGQLFHIDFGHFLDHK
KKKFGYKRE
RVPFVLTQDFLIVISKGAQECTKTREFERFQEMCYKAYLAI
RQHANLFIN
LFSMMLGSGMPELQSFDIAYIRKTLALDKTEQEAL EYFM
KQMNDAAHHGG WTTKMDWIFHTIKQHALN

Predicted molecular weight	151 kDa including tags
Amino acids	1 to 1068
Tags	GST tag N-Terminus
Additional sequence information	U79143.

Specifications

Our [Abpromise guarantee](#) covers the use of **ab196098** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies SDS-PAGE
Form	Liquid
Additional notes	Complex of N-terminal GST-tagged recombinant full length Human PI 3 Kinase p110 alpha and recombinant full length Human PI 3 kinase p85 alpha (no tag) coexpressed in a Baculovirus infected Sf9 cell expression system. MWt 235 kDa (complex).

Preparation and Storage

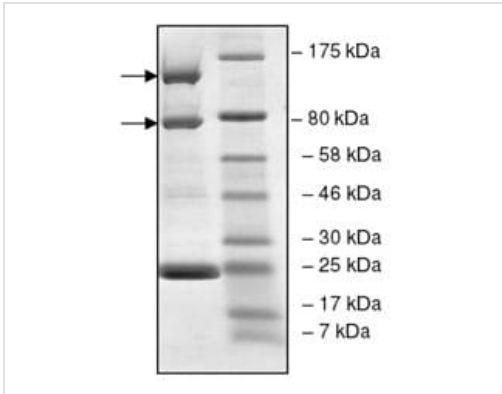
Stability and Storage	Shipped on Dry Ice. Store at -80°C. Avoid freeze / thaw cycle. pH: 8.00 Constituents: 0.63% Tris HCl, 0.64% Sodium chloride, 0.02% Potassium chloride, 0.49% Glutathione, 20% Glycerol, 0.05% DTT This product is an active protein and may elicit a biological response in vivo, handle with caution.
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General Info

Relevance	Phosphoinositide 3-kinases (PI3Ks) phosphorylate phosphatidylinositols (PIs) at their 3' OH position generating lipid second messengers and thereby regulate numerous biological processes including cell growth, differentiation, survival, proliferation, migration and metabolism. On the basis of structural similarities and substrate specificity, the PI3K family can be subdivided into three classes termed I, II, and III. All human class I members are heterodimers consisting of a catalytic subunit (MW approx. 110 kDa) and a non-catalytic subunit (MW 50, 55, 85, or 101 kDa) and are known to phosphorylate phosphatidylinositol (PI), phosphatidylinositol-4-mono-phosphate (PIP) and phosphatidylinositol-4,5-bisphosphate (PIP2) in vitro. The class I members can be further subdivided into class IA and IB PI3Ks. Class IA exists in three isoforms (p110alpha, p110beta and p110delta whereas the only class IB member is termed p110gamma. Class IA
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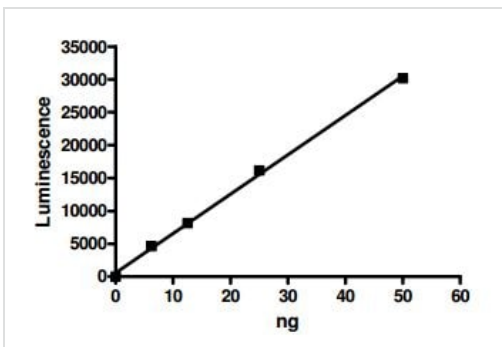
PI3Ks are activated by adaptor proteins such as Ras or BCAP, or tyrosine-kinase-associated receptors including antigen, co-stimulatory and cytokine receptors (e.g. CD19, CD28, Insulin receptor, EGFR, and PDGFR). p110gamma is activated by G-protein-coupled receptors (GPCRs). Effectors of class I PI3Ks are pleckstrin homology domain proteins such as Akt/PKB, BTK, TEC, ITK, BAM32, and small GTPases (e.g. Cdc42, Rac, or Ras). The action of PI3Ks is regulated by the phosphatidylinositol- 3,4,5-trisphosphate phosphatases SHIP and PTEN.

Images



10% SDS-PAGE analysis of 3.2 µg ab196098 with Coomassie staining.

SDS-PAGE - Recombinant human PI 3 Kinase p110 alpha + PI 3 kinase p85 alpha protein (ab196098)



Kinase assay using ab196098 showing specific activity as 880 pmol/min/µg.

Functional Studies - Recombinant human PI 3 Kinase p110 alpha + PI 3 kinase p85 alpha protein (ab196098)

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