

Certificate of Analysis

PI 3-Kinase (p110δ/p85α) mouse

(Recombinant enzyme expressed in Sf21 insect cells)

Item # 14-789, 14-789-K, 14-789M

Parent Lot # 1604633

The data presented in this document apply to the parent lot shown above and to all pack sizes derived from subsequent vialling runs of this parent lot. An alphabetical suffix after the parent lot number is used to denote each vialling run.

Product Description: Complex of N-terminal 6His-tagged recombinant mouse p110delta full length and untagged, recombinant, mouse p85alpha full length. Co-expressed by baculovirus in Sf21 insect cells. Purified using Ni²⁺/NTA-agarose.

Purity (p110δ and p85α combined) 76% by SDS-PAGE and Coomassie blue staining. p110δ MW = 124kDa, p85α MW = 84kDa.

Specific Activity (Parent lot# 1604633): 343U/mg, where one unit of PI 3-Kinase (p110δ/p85α) activity is defined as 1nmol phosphatidylinositol 3,4,5-trisphosphate (PIP3) formed per minute at room temperature with a final ATP concentration of 100μM.

Formulation: 0.774mg/ml of enzyme in 50mM Tris/HCl pH7.5, 300mM NaCl, 0.1mM EGTA, 0.03% Brij-35, 270mM sucrose, 0.2mM PMSF, 1mM benzamidine, 0.1% 2-mercaptoethanol. Frozen solution.

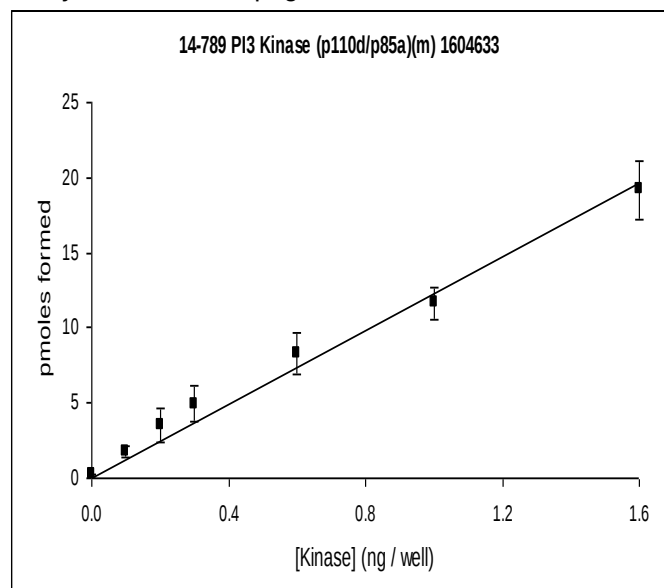
Storage and Stability: On receipt of material store at -70°C. Unopened reagent is stable for a minimum of 1 year from date of shipment when stored at recommended storage temperature. Avoid repeat freeze/thaw cycles. For maximum recovery of product, centrifuge original vial prior to removing the cap.

Handling Recommendations: Rapidly thaw the vial under cold water and immediately place on ice. Aliquot unused material into pre-chilled micro-centrifuge tubes and immediately snap-freeze the vials in liquid nitrogen prior to re-storage at -70°C.

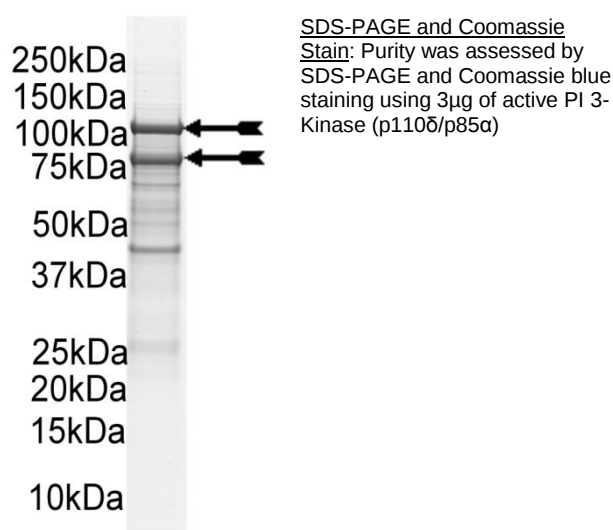
**FOR IN VITRO RESEARCH USE ONLY
NOT FOR USE IN HUMANS OR ANIMALS**

Quality Control Testing

Kinase Assay: 0.0–1.6ng of this enzyme phosphorylated 10μM phosphatidylinositol 4, 5-bisphosphate in the assay referenced on page two.



MS Tryptic Fingerprint: Confirmed product identity as PI 3-Kinase (p110δ/p85α) with the p110δ and p85α translated sequences listed on pages three and five.



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Eurofins PI3 Kinase Homogeneous Time-resolved Fluorescence (HTRF) Class I Reagent Kits

The following Eurofins kits are suitable for use with this enzyme:

Cat. No	Kit Description
33-016	PI3 Kinase 4-Step Assay Reagent 1-Plate Kit
33-017	PI3 Kinase 4-Step Assay Reagent 5-Plate Kit
33-036	PI3 Kinase 4-Step Assay Reagent Kit (10000 wells)
33-037	PI3 Kinase 4-Step Assay Reagent Kit (50000 wells)
33-040	PI3 Kinase 3-Step Assay Reagent Kit (384 wells)
33-041	PI3 Kinase 3-Step Assay Reagent Kit (1920 wells)
33-047	PI3 Kinase 3-Step Assay Reagent Kit (10000 wells)

Kits 33-016, 33-017, 33-036 and 33-037 provide reagents and assay details for the Eurofins standard 4-step HTRF assay. This assay format is suitable for the majority of small and medium throughput screening work. The 3-step HTRF assay (kits 33-040, 33-041, 33-047) was introduced to reduce the number of assay steps to aid high throughput screening. Items 33-040 and 33-041 are intended as introductory kits for 3-step procedure work up. Please contact us for any further information regarding different kit formats (discoveryservices@eurofins.com).

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p110δ Sequence Information

<u>Protein</u>	Mouse p110δ
<u>Tags</u>	N-terminal 6His
<u>Native sequence</u>	M37 of the recombinant sequence is equivalent to M1 of mouse p110δ
<u>Accession number</u>	GenBank NM_008840

Recombinant p110δ amino acid sequence:

```

1 MSYYHHHHH DYDIPTTENL YFQGAMDPEF KGLRRQMPPG VDCPMEFWTK EESQSVVWDF
61 LLPTGVYLN FVSRNANLST IKQVLWHRAQ YEPLFHMLSD PEAYVFTCVN QTAEQQELED
121 EQRRLCDIQP FLPVLRRLVAR EGDVKKLIN SQISLLIGKG LHEFDSL RDP EVNDFRTKMR
181 QFCEEAHAHR QQLGWVEWLQ YSFPLQLEPS ARGWRAGLLR VSNRALLVNV KFEGSEESFT
241 FQVSTKDMPL ALMACALRKK ATVFRQPLVE QPEEYALQVN GRHEYLYGNY PLCHFQYICS
301 CLHSGLT PHL TMVHSSSILA MRDEQSNPAP QVQKPRAKPP PIPAKKPSSV SLWSLEQPFS
361 IELIEGRKVN ADERMKLVVQ AGLFHGNEML CKTVSSSEVN VCSEPVWKQR LEFDISVCDL
421 PRMARLCFAL YAVVEKAKKA RSTKKKSKKA DCPIAWANLM LFDYKDQLKT GERCLYMWPS
481 VPDEKGELLN PAGTVRG NPN TESAAALVIY LPEVAPHPVY FPALEKILEL GRHGERGRIT
541 EEEQLQLREI LERRSGELY EHEKDLVWKM RHEVQEHFPE ALARLLLVT K WNKHEDVAQM
601 LYLCSWPEL PVLSALELLD FSPDCYVGS FAIKSLRKL T DDEL FQYLLQ LVQVLKYESY
661 LDCELTKFL GRALANRKIG HFLFWHLRSE MHVPSVALRF GLIMEAYCRG STHHMKVLMK
721 QGEALSKLKA LNDVVKVSSQ KTKPQTKEM MHMCMRQETY MEALSHLQSP LDPSTLLEE V
781 CVEQCTFMD S KMKPLWIMYS SEEAGSAGNV GIIFKNGDDL RQDMLTLQMI QLMVDLWKQE
841 GLDLRMPY G CLPTGDRTGL IEVVLHSDTI ANIQLNKS NM AATAAFNKDA LLNLWLSKNP
901 GEALDRAIEE FTLS CAGYCV ATYVLGIGDR HSDNIMIRE S GQLFHIDFGH FLGNFKTKFG
961 INRERVPI FLY TYDFVHVIQ Q GKTNNSEKFE RFRGYCERAY TILRRHGLLF LHLFALMRAA
1021 GLPELSCSKD IQYLKDSLAL GKTEEEALKH FRVKFNEALR ESWKTKVNW L AHNVS KDNQR

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Recombinant p110δ nucleotide sequence:

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1 atgtcgtact accatcacca tcaccatcac gattacgata tcccaacgac cgaaaacctg
61 tattttcagg gcgccatgga tccggaattc aaaggcctac gtcgacaaat gccccctggg
121 gtggactgcc ccatggagtt ctggacaaa gagagagacc agagcgtggt tgttgacttc
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301 cccgagcgct atgtgttcac ctgtgtgaac cagacggcgg agcagcagga gttggaggat
361 gagcagcgga agctgtgcga catccagccc ttcctgcccg tgctgcgcct gttggcccga
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481 ctccatgagt ttgattccct gcgggacccg gaagtaaacc acttccgcac taagatgcgc
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901 tgcctacaca gcgggctgac ccctcatctg accatggtcc actcctctc catccttgct
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3241 taa

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p85α Sequence Information

<u>Protein</u>	Mouse p85α
<u>Tags</u>	Untagged
<u>Native sequence</u>	M1 of the recombinant protein is equivalent to M1 of mouse p85α
<u>Accession number</u>	GenBank NM_001077495

Recombinant p85α amino acid sequence:

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1  MSAEGYQYRA  LYDYKKEREE  DIDLHLGDIL  TVNKGSLVAL  GFSDGQEARP  EDIGWLNGYN
61  ETTGERGDFP  GTYVEYIGRK  RISPTPKPR  PPRPLPVAPG  SSKTEADTEQ  QALPLPDLAE
121 QFAPPDVAPP  LLIKLLEAIE  KKGLECESTLY  RTQSSSNPAE  LRQLLDCDAA  SVDLEMIDVH
181 VLADAFKRYL  ADLPNPVIPV  AVYNEMMSLA  QELQSPEDCI  QLLKKLIRLP  NIPHCWLT
241 QYLLKHFFKL  SQASSKNLLN  ARVLSEIFSP  VLFRFPAASS  DNTEHLIKAI  EILISTEWNE
301 RQPAPALPPK  PPKPTTVANN  SMNNNMSLQD  AEWYWGDISR  EEVNEKLRDT  ADGTFLVRDA
361 STKMHGDYTL  TLRKGGNNKL  IKIFHRDGKY  GFSDPLTFNS  VVELINHYRN  ESLAQYNPKL
421 DVKLLYPVSK  YQQDQVVKED  NIEAVGKKLH  EYNTQFQEK  REYDRLYEEY  TRTSQEIQMK
481 RTAIEAFNET  IKIFEEQCQT  QERYSKEYIE  KFKREGNEKE  IQRIMHNHDK  LKSRISEIID
541 SRRRLEEDLK  KQAAEYREID  KRMNSIKPDL  IQLRKTRDQY  LMWLTQKGVR  QKKLNEWLGN
601 ENTEDQYSLV  EDDELPHHD  EKTWNVGSSN  RNKAENLLRG  KRDTGFLVRE  SSKQGCYACS
661 VVDGGEVKHC  VINKTATGYG  FAEPYNLYSS  LKELVLHYQH  TSLVQHNSDL  NVTLAYPVYA
721  QQR

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Recombinant p85α nucleotide sequence:

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1  atgagtgtctg  aggggtacca  gtacagagca  ctgtacgact  acaagaagga  gcgagaggaa
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121  ggattcagtg  atggccagga  agcccgccct  gaagatattg  gctggttaaa  tggctacaat
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2161 caacagaggc gataa
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Reviewed and approved by site quality representative.

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