

ProQinase™ PI4KB

phosphatidylinositol 4-kinase beta

Recombinant Human Active Lipid Kinase

HGNC Symbol: PI4KB

Synonyms: NPIK, pi4K92, PI4K92, PI4Kbeta, PI4KIIIBETA, PIK4CB

Lipid Kinase Family: PI3K Class IV

(according to: Phylogenomics of phosphoinositide lipid kinases: perspectives on the evolution of second messenger signaling and drug discovery: James R Brown & Kurt R Auger; BMC Evolutionary Biology 11, 4-14 (2011))

Product No.: 1157-0000-1

Lot: 004

Description: Human PI4KB, full length, amino acids M₁-M₈₀₁ (as in [NCBI/Protein](#) entry NP_001185702.1), N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Product identity: PI4KB Lot 004, was confirmed as PI4KB by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 120,056 Da

Expression host: Sf9 insect cells

Purification: Immobilized Metal Affinity Chromatography

Activation: This kinase was not activated by special procedures

Storage buffer: 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 0.1 % Triton X-100, 20% glycerol

Storage temperature: -80°C

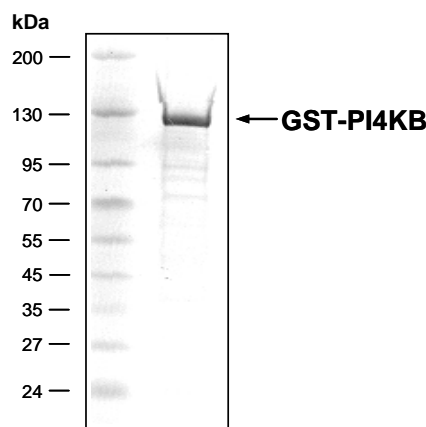
For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.253 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

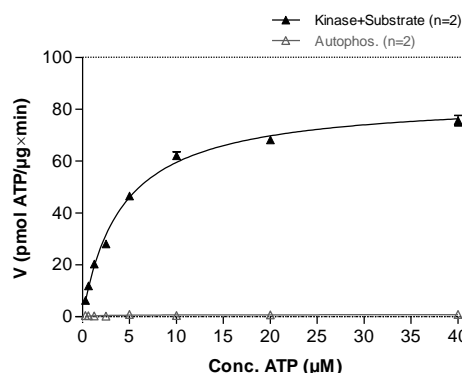
Specific kinase activity (P_i transfer): 84 pmol/µg × min
ATP-K_M: 4.2 µM

PI4KB Lot 004:
Coomassie stain



2.5 µg GST-PI4KB

PI4KB Lot 004:
Determination of V_{max} and K_M value for ATP



• Assay conditions:
50 mM HEPES-NaOH, pH 7.5
3 mM MnCl₂
1 mM EGTA
100 mM NaCl
0,03% CHAPS
2 mM DTT
ATP: variable concentration
1 % (v/v) DMSO
Substrate: PI: L-alpha-phosphatidylinositol 50 µM
PI4KB: 1 µg/ml

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GST-PI4KB Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWAQTF	GGGDHPPKSD	PMGHHHHHG	RDSLEVLFCG	240
241	PLAMGARGRM	RFLEARSLAV	AMGDTVVEPA	PLKPTSEPTS	GPPGNNGGSL	LSVITEGVGE	300
301	LSVIDPEVAQ	KACQEVLEKV	KLLHGGVAVS	SRGTPELVN	DGVDSEIRC	LDDPPAQIRE	360
361	EEDEMGAAVA	SGTAKGARRR	RQNNSAQSW	LLRLFESKLF	DISMAISYLY	NSKEPGVQAY	420
421	IGNRLF CFRN	EDVDFYLPQL	LNMYIHMED	VGDAIKPYIV	HRCRQSINF	S	480
481	SSDMHISTQR	HSRGTCLRKL	ILSDELKPAH	RKRELPSLSP	APDTGLSPSK	RTHQRKSDA	540
541	TASISLSSNL	KRTASNPKVE	NEDEPVRLAP	EREFIKSLMA	IGKRLATLPT	KEQKTQRLIS	600
600	ELSLLNHKLP	ARVWLPTAGF	DHHVVRVPH	T	QAVVLNSKDK	APYLIYVEVL	660
661	PARIPENRIR	TRSVENLPEC	CGITHEQRAG	S	SFSTVPNYDN	DDEAWSVDDI	720
721	HTNSCDNISQ	FSDVSITSQE	SKEPVFIAAG	DIRRRLSEQL	AHTPTAFKRD	PEDPSAVALK	780
781	EPWQEKVRR	REGSPYGHLP	NWRLLSVIVK	CGDDLROELL	AFQVLKQLQS	IWEQERVPLW	840
841	IKPYKILVIS	ADSGMIEPVV	NAVSIHQVKK	QSQLSLLDYF	LQEHGSYTTE	AFLSAQRNFV	900
901	QSCAGYCLVC	YLLQVKDRHN	GNILLDAEGH	IIHIDFGFIL	SSSPRNLGFE	TSFAKLTTEF	960
961	VDVMGGLDGD	MFNYKMLML	QGLIAARKHM	DKVVQIVEIM	QQGSQLPCFH	GSSTIRNLKE	1020
1021	RFHMSMTEEQ	LQLLVEQMVD	GSMRSITTKL	YDGFQYLTNG	IM		1080

1-218: GST Red: HIS6-tag Green: 3C cleavage site blue: PI4KB

PI4KB wt ¹ Amino Acid Sequence							
1	MGDTVVEPAP	LKPTSEPTSG	PPGNNGGSL	SVITEGVGEL	SVIDPEVAQK	ACQEVLEKVK	60
61	LLHGGVAVSS	RGTPELVNG	DGVDSEIRCL	DDPPAQIREE	EDEMGAAVAS	GTAKGARRRR	120
121	QNNSAQSWL	LRLFESKLF	ISMAISYLYN	SKEPGVQAYI	GNRLF CFRNE	DVDFYLPQLL	180
181	NMYIHMEDV	GDAIKPYIVH	RCRQSINFSL	QCALLLGAYS	SDMHISTQRH	SRGTCLRKLI	240
241	LSDELKPAHR	KRELPSLSPA	PDTGLSPSKR	THQRKSDAT	ASISLSSNLK	RTASNPKVEN	300
301	EDEPVRLAPE	REFIKSLMAI	GKRLATLPTK	EQKTQRLISE	LSLLNKLPA	RVWLPTAGFD	360
361	HHVVRVPHQ	AVVLNSKDKA	PYLIYVEVLE	CENFDTTSVP	ARIPENRIRS	TRSVENLPEC	420
421	GITHEQRAGS	FSTVPNYDND	DEAWSVDDIG	ELQVELPEVH	TNSCDNISQF	SVDSITSQES	480
481	KEPVFIAAGD	IRRLSEQLA	HTPTAFKRD	EDPSAVALKE	PWQEKVRRIR	EGSPYGHLPN	540
541	WRLLSVIVKC	GDDLROELLA	FQVLKQLQSI	WEQERVPLWI	KPYKILVISA	DSGMIEPVVN	600
600	AVSIHQVKKQ	SQLSLLDYFL	QEHGSYTTEA	FLSAQRNFVQ	SCAGYCLVCY	LLQVKDRHNG	660
661	NILLDAEGHI	IHIDFGFILS	SSPRNLGFET	SAFKLTTEFV	DVMGGLDGD	FNYYKMLMLQ	720
721	GLIAARKHMD	KVVQIVEIMQ	QGSQLPCFHG	SSTIRNLKER	FHMSMTEEQL	QLLVEQMVDG	780
781	SMRSITTKLY	DGFQYLTNGI	M				840

blue: PI4KB sequence expressed in recombinant protein

¹NCBI/Protein accession number NP_001185702.1