

ProQinase™ PIP5K1C

phosphatidylinositol-4-phosphate 5-kinase type 1 gamma

Recombinant Human Active Lipid Kinase

HGNC Symbol: PIP5K1C

Synonyms: PIP5K1-gamma, PIP5Kgamma, PIP5K-GAMMA, PIPKlg_v4

Lipid Kinase Family: PIP5K

(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.: 1222-0000-1

Lot: 003

Description: Human PIP5K1C, full length, amino acids M₁-T₆₆₈ (as in [NCBI/Protein](#) entry NP_036530.1), untagged, expressed in Sf9 insect cells

Product identity: PIP5K1C Lot 003, was confirmed as PIP5K1C by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 73,260 Da

Expression host: Sf9 insect cells

Purification: GST-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, 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: 0.159 µg/µl

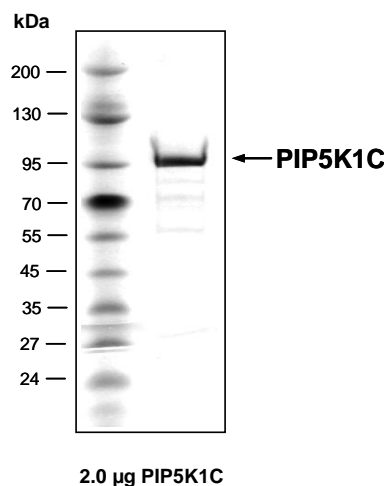
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

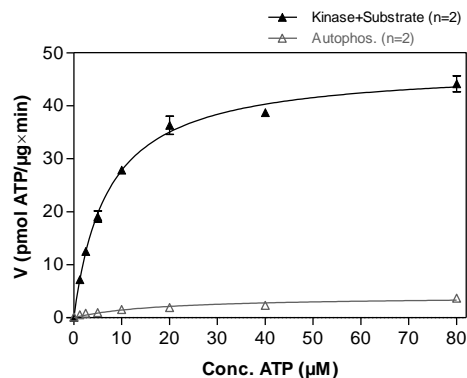
Specific kinase activity (P_i transfer): 47 pmol/µg × min

ATP-K_M: 7 µM

**PIP5K1C Lot 003:
Coomassie stain**



**PIP5K1C Lot 003:
Determination of V_{max} and K_M value for ATP**



Determination of K_M value & Specific activity:

- Assay conditions:
- 60 mM HEPES-NaOH, pH 7.5
- 3 mM MnCl₂
- 3 µM Na-orthovanadate
- 1.2 mM DTT
- 50 µg/ml PEG_{20,000}
- ATP (variable)
- Substrate: PI: 25 µM / PS: 225 µM
- PI: L-alpha-phosphatidylinositol
- PS: 1-Palmitoyl-2-Oleoyl-sn-Glycero-3-[Phospho-L-Serine]
- PIP5K1C: 1 µg/ml

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PIP5K1C Recombinant Fusion Protein Amino Acid Sequence								
1	GPLAML	MELE	VPDEAESAEA	GAVPSEAAWA	AESGAAAGLA	QKKAAPTEVL	SMTAQP	60
61	GKKLGHRGVD	ASGETTYKKT	TSSTLKGAIQ	LGIGYTVGHL	SSKPERDVL	MQDFYV	VESIF	120
121	FPSEGSNLTP	AHHFQDFRFK	TYAPVAFRYF	RELFGIRPDD	YLYSLCNEPL	IELSNPGASG		180
181	SLFYVTSDD	FIIKTVMHKE	AEFLQKLLPG	YYMNLNQNPR	TLLPKFYGLY	CVQSGGKNIR		240
241	VVVMNINLPR	VVKMHLKFDL	KGSTYKRRAS	KKEKEKSFPT	YKDLDFMQDM	PEGLLLDADT		300
301	FSALVKTLQR	DCLVLESFKI	MDYSLLLGVH	NIDQHERERQ	AQGAQSTSDE	KRPVGQKALY		360
361	STAMESIQGG	AARGEAI	ESD	DTMGGIPAVN	GRGERLLLHI	GIIDILQSYR	FIKLEHTWK	420
421	ALVHDGDTVS	VHRPSFYAER	FFKFMSTVF	RKNSSLKSSP	SKKGRGGALL	AVKPLGPTAA		480
481	FSASQIPSER	EEAQYDLRGA	RSYPTLEDEG	RPDLLPCTPP	SFEEATTASI	ATTLSSTLSL		540
541	IPERSPSETS	EQPRYRRRTQ	SSGQDGRPQE	EPPAEEDLQQ	ITVQVEPACS	VEIVVPKEED		600
601	AGVEASPAGA	SAAVEVETAS	QASDEEGAPA	SQASDEEDAP	ATDIYFPTDE	RSWVYSPLHY		660
661	SAQAPPASDG	ESDT						720

1-6: legacy of 3C cleavage blue: PIP5K1C

PIP5K1C wt ¹ Amino Acid Sequence							
1	MELEVPDEAE	SAEAGAVPSE	AAWAAESGAA	AGLAQKKAAP	TEVLSMTAQP	GPGHGKKLGH	60
61	RGVDASGETT	YKKTTSSTLK	GAIQLGIGYT	VGHLSSKPER	DVLMQDFYV	ESIFFPSEGS	120
121	NLTPAHHFQD	FRFKTYAPVA	FRYFRELFGI	RPDDYLYSLC	NEPLIELSNP	GASGSLFYVT	180
181	SDDEFIIKTV	MHKEAEFLQK	LLPGYYMNLN	QNPRTLLPKF	YGLYCVQSGG	KNIRVVMMN	240
241	ILPRVVKMHL	KFDLKGSTYK	RRASKKEKEK	SFPTYKDLDF	MQDMPEGLL	DADTF	300
301	TLQRDCLVLE	SFKIMDYSLL	LGVHNIDQHE	RERQAQGAQS	TSDEKRPVGG	KALYSTAMES	360
361	IQGGAARGE	IESDDTMGGI	PAVNGRGERL	LLHIGIIDIL	QSYRFIKKLE	HTWKALVHDG	420
421	DTVSVHRPSF	YAERFFKFMS	NTVFRKNSL	KSSPSKGRG	GALLAVKPLG	PTAAFSASQI	480
481	PSEREEAQYD	LRGARSYPTL	EDEGRPDL	CTPPSFEEAT	TASIATTLSS	TLSIPERSP	540
541	SETSEQPRYR	RRTQSSGQDG	RPQEEPPAEE	DLQQITVQVE	PACSV	VEIVVP	600
600	PAGASAAVEV	ETASQASDEE	GAPASQASDE	EDAPATDIYF	PTDERSWVYS	PLHYSAQAPP	660
661	ASDGESDT						720

blue: PIP5K1C sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_036530.1