

PIP5K1A

phosphatidylinositol-4-phosphate 5-kinase type 1 alpha

Recombinant Human Active Lipid Kinase

HGNC Symbol: PIP5K1A

Synonyms: PIP5K1-alpha, PIP5K1alpha, PtdIns(4)P-5-kinase 1 alpha

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.: 1231-0000-1

Lot: 003

Description: Human PIP5K1A, full length, amino acids M₁-H₅₀₀ (as in [NCBI/Protein](#) entry AAC50912.1), untagged, expressed in Sf9 insect cells

Product identity: PIP5K1A Lot 003, was confirmed as PIP5K1A by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 56,053 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: 0.158 µg/µl

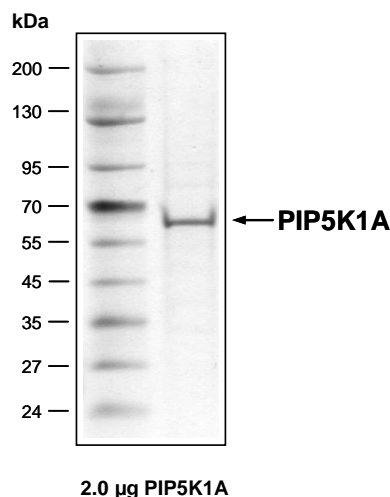
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

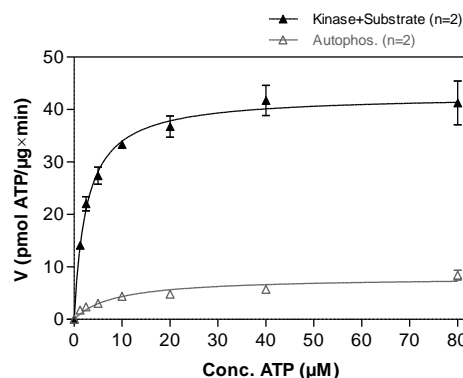
Specific kinase activity (P_i transfer): 43 pmol/µg × min

ATP-K_M: 3 µM

PIP5K1A Lot 003:
Coomassie stain



PIP5K1A 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]
 - PIP5K1A: 1 µg/ml

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PIP5K1A

Product No.: 1231-0000-1

PIP5K1A Recombinant Fusion Protein Amino Acid Sequence							
1	GPLAMGARGR	MASASSGPSS	SVGFSSFDPA	VPSCTLSSAS	GIKRPMASEV	PYASGMPIKK	60
61	IGHRSVDSSG	ETTYKKTSS	ALKGAIQLGI	THTVGSLSTK	PERDVLQDF	YVESIFFPS	120
121	EGSNLTPAHH	YNDFRFKTYA	PVAFRYFREL	FGIRPDDYLY	SLCSEPLIEL	CSSGASGSLE	180
181	YVSSDEFII	KTVQHKEAEF	LQKLLPGYYM	NLNQNPRTL	PKFYGLYCVQ	AGGKNIRIVV	240
241	MNLLPRSVK	MHIKIDLKGS	TYKRRASQKE	REKPLPTFKD	LDFLQDIPDG	LFLDADMYNA	300
301	LCKTLQRDCL	VLQSFKIMDY	SLLMSIHNID	HAQREPLSSE	TQYSVDTRRP	APQKALYSTA	360
361	MESIQGEARR	GGTMETDDHM	GGIPARNSKG	ERLLLYIGII	DILQSYRFVK	KLEHSWKALV	420
421	HDGDTVSVHR	PGFYAERFQR	FMCNTVFKKI	PCVHLGRPDV	LPQTPPLEEI	SEGSPIDPS	480
481	FSPLVGETLQ	MLTTSTTLEK	LEVAESEFTH				540

1-10: legacy of 3C cleavage blue: PIP5K1A

PIP5K1A wt ¹ Amino Acid Sequence							
1	MASASSGPSS	SVGFSSFDPA	VPSCTLSSAS	GIKRPMASEV	PYASGMPIKK	IGHRSVDSSG	60
61	ETTYKKTSS	ALKGAIQLGI	THTVGSLSTK	PERDVLQDF	YVESIFFPS	EGSNLTPAHH	120
121	YNDFRFKTYA	PVAFRYFREL	FGIRPDDYLY	SLCSEPLIEL	CSSGASGSLE	YVSSDEFII	180
181	KTVQHKEAEF	LQKLLPGYYM	NLNQNPRTL	PKFYGLYCVQ	AGGKNIRIVV	MNLLPRSVK	240
241	MHIKIDLKGS	TYKRRASQKE	REKPLPTFKD	LDFLQDIPDG	LFLDADMYNA	LCKTLQRDCL	300
301	VLQSFKIMDY	SLLMSIHNID	HAQREPLSSE	TQYSVDTRRP	APQKALYSTA	MESIQGEARR	360
361	GGTMETDDHM	GGIPARNSKG	ERLLLYIGII	DILQSYRFVK	KLEHSWKALV	HDGDTVSVHR	420
421	PGFYAERFQR	FMCNTVFKKI	PCVHLGRPDV	LPQTPPLEEI	SEGSPIDPS	FSPLVGETLQ	480
481	MLTTSTTLEK	LEVAESEFTH					540

blue: PIP5K1A sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number AAC50912.1

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