

PDK1

3-phosphoinositide dependent protein kinase-1

Recombinant Human Active Protein Kinase

HGNC Symbol: PDPK1

Synonyms: PKB-like

Product No.: 0367-0000-1

Lot: 004

Description: Human PDK1, N-terminal fragment, amino acids M₁-M₄₆₀ (as in NCBI/Protein entry NP_002604.1), N-terminal HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: PDK1 Lot 004, was confirmed as PDK1 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 56,192 Da

Expression: Baculovirus infected Sf9 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, 20% glycerol

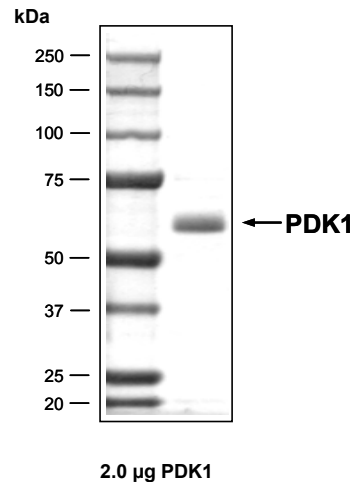
Storage temperature: -80°C
Avoid repeated freeze-thaw cycles!

Protein concentration: 0.746 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

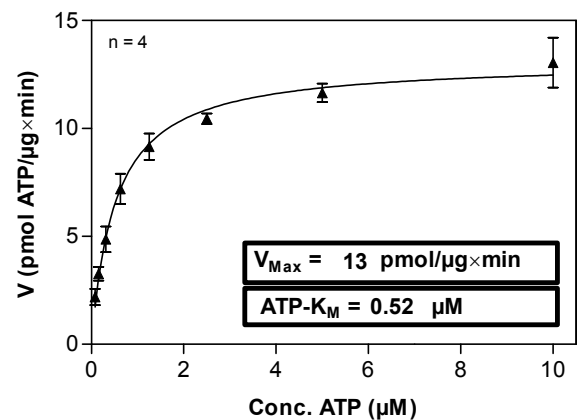
Biochemical Parameters:

Specific activity: 13 pmol/µg×min
ATP-K_M: 0.5 µM

PDK1 Lot 004: Coomassie stain



PDK1 Lot 004: 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 MgCl₂
3 mM MnCl₂
3 µM Na-orthovanadate
1.2 mM DTT
50 µg / ml PEG_{20,000}
ATP (variable)
Substrate: tetra(LRRWSLG), 40 µg / ml
PDK1: 0.8 µg / ml
- Filter binding assay
MSFC membrane (Millipore)

Additional assay technology: PDK1 Lot 004

was also successfully tested by ProQinase for the use with the ADP-Glo™ Kinase assay from 

PDK1

Product No.: 0367-0000-1

PDK1 Recombinant Fusion Protein Amino Acid Sequence											
1	MSPIDPMG	HH	HHHH	GRRRAS	VAAGI	LVPRG	SPGLDGICSR	NS	MARTTSQL	YDAVPIQSSV	60
61	VLCS	CPSPSM	VRTQ	TESSTP	PGIP	GGRSRQ	PAMDGTAAEP	RPGAGSLQHA	QPPPQPRKKR		120
121	PEDFKFGKIL	GE	SFSTVVL	ARELATSREY	AIKILEKRHI	IKENKVPYVT	RERDVMSRLD				180
181	HPFFVKLYFT	FQDDEKLYFG	LSYAKNGELL	KYIRKIGSFD	ETCTRFYTAE	IVSALEYLHG					240
241	KGIIHRDLKP	ENILLNEDMH	IQITDFGTAK	VLSPESKQAR	ANSFVGTAQY	VSPELLTEKS					300
301	ACKSSDLWAL	GCIIYQLVAG	LPPFRAGNEY	LIFQKIIKLE	YDFPEKFFPK	ARDLVEKLLV					360
361	LDATKRLGCE	EMEGYGPLKA	HPFFESVTWE	NLHQQTTPPKL	TAYLPAMSED	DEDCYGNYDN					420
421	LLSQFGCMQV	SSSSSSHSLS	ASDTGLPQRS	GSNIEQYIHD	LDSNSFELDL	QFSEDEKRL					480
481	LEKQAGGNPW	HQFVENNLIL	KM								540
Red: HIS6-tag Green: Thrombin blue: PDK1 fragment											

Red: HIS6-tag Green: Thrombin blue: PDK1 fragment

PDK1 wt ¹ amino acid sequence							
1	MARTTSQLYD	AVPIQSSVVL	CSCPSPSMVR	TQTESSTPPG	IPGGSRQGPA	MDGTAAEPRP	60
61	GAGSLQHAQP	PPQPRKKRPE	DFKFGKILGE	GSFSTVVLAR	ELATSREYAI	KILEKRHIK	120
121	ENKVPYVTRE	RDVMSRLDHP	FFVKLYFTFQ	DDEKLYFGLS	YAKNGELLKY	IRKIGSFDET	180
181	CTRFYTAEIV	SALEYLHGKG	IIHRDLKPEN	ILLNEDMHIQ	ITDFGTAKVL	SPESKQARAN	240
241	SFVGTAQYVS	PELLTEKSAC	KSSDLWALGC	IIYQLVAGLP	PFRAGNEYLI	FQKIKLEYD	300
301	FPEKFFPKAR	DLVEKLLVLD	ATKRLGCEEM	EGYGPLKAHP	FFESVTWENL	HQQTTPPKLTA	360
361	YLPAMSEDDE	DCYGNYDNLL	SQFGCMQVSS	SSSSHSLSAS	DTGLPQRSGS	NIEQYIHDLD	420
421	SNSFELDLOF	SEDEKRLLE	KQAGGNPWHQ	FVENNLILKM	GPVDRKRGFL	ARRRQILLTE	480
481	GPHLYYVDPV	NKVLKGEIPW	SQELRPEAKN	FKTFFVHTPN	RTYYLMDPSG	NAHKWCRKIQ	540
541	EVWRQRYQSH	PDAAVQ					600
blue: PDK1 sequence expressed in fusionprotein							

blue: PDK1 sequence expressed in fusionprotein

¹NCBI/Protein accession number NP_002604.1

This product is for in vitro research use only, not for use in humans or animals. ProQinase disclaims any warranty explicitly or implied that the use of the product or parts of the product is free from third party intellectual property claims unless this is explicitly stated.