

Certificate of Analysis

PDK1, 100 µg

3-Phosphoinositide Dependent Protein Kinase-1, Histidine-tagged

ThermoFisher
SCIENTIFIC

Part Number: PR4194C

Lot Number: 2075787E

Immediate Storage: -80°C

Shipping Conditions: dry ice

5781 Van Allen Way

Carlsbad, CA 92008

Phone: 760.603.7200

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Description:

Recombinant human full length protein, Histidine-tagged, expressed in insect cells. No special measures were taken to activate this kinase.

Specific Activity:

34 nmoles of phosphate transferred to PDK1 substrate (DGVTTKTFAGTPEYLAPEVRREPRILSEEEQEMFRDFDYIADW) per minute per mg of total protein at 30°C. Activity determined at a final protein concentration of 1 µg/mL.

Concentration:

0.25 mg/mL total protein as measured using the Bradford protein assay with BSA as a standard.

Calculated **3,740 nM**.

Storage and Handling:

For maximum recovery please spin prior to use. Unless noted below, aliquots of the 5 µg, 10 µg and 20 µg sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below 20 µL are not recommended. **Please never store a kinase diluted.** If properly stored at -80°C, this product is guaranteed for 6 months from date of purchase.

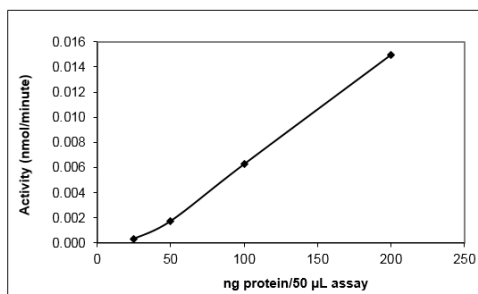
Can be stored at -20°C for less than one month.

Storage Buffer:

50 mM Tris (pH 7.5), 100 mM NaCl, 0.5 mM EDTA, 0.5 mM EGTA, 0.05% Triton® X-100, 5 mM DTT and 20% Glycerol.

QUALITY ASSURANCE

PDK1 Activity Graph



Dilution Buffer:

50 mM Tris (pH 7.5), 15 mM DTT and 0.5 mM EGTA.

Assay Conditions:

PDK1 was pre-diluted in enzyme dilution buffer and assayed in 50 mM Tris (pH 7.5), 15 mM MgCl₂, 2.5 mM DTT, 5 mM EGTA, 200 µM ATP, 100 µM PDK1 substrate (DGVTTKTFAGTPEYLAPEVRREPRILSEEEQEMFRDFDYIADW) and trace [³²P]-γ-ATP for 10 minutes at 30°C.

Gel Information for PDK1

Page Description: The SDS-PAGE and/or Native PAGE were run on 4-20% Tris-Glycine Novex™ gels (Catalog #: EC6025BOX).

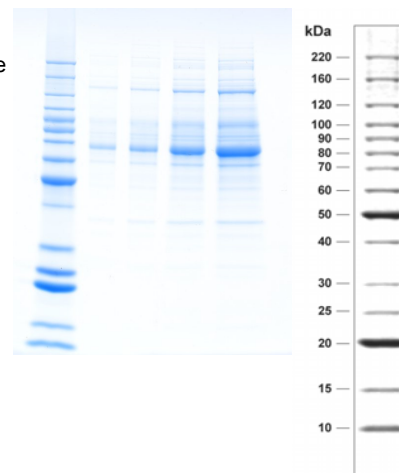
Lane 1: Invitrogen™ BenchMark™ Protein Ladder (Catalog #: 10747-012).

Lane 2: 0.5 µg PDK1

Lane 3: 1.0 µg PDK1

Lane 4: 2.5 µg PDK1

Lane 5: 5.0 µg PDK1



Purity:

60% as determined by a SDS-PAGE gel stained with SimplyBlue™ SafeStain.

Molecular Weight:

66.9 kDa. Calculated from the protein sequence(s).

Mass Spectrometry:

PDK1 was subjected to proteolytic digest followed by mass spec analysis. The resulting MS/MS data verified PDK1 identity by comparison against the amino acid sequence(s) of the recombinant protein.

Protein sequence alignment with reference sequence(s)

GenBank Accession Number: NP_002604

1	MSYYHHHHH	DYDIPTTENL	YFQGAMDP	EF	MARTTSQLYD	AVPIQSSVVL	CSCPSPSMVR	TQTESSTPPG	IPGGSRQGPA	MDGTAAEPRP	GAGSLQHAQP	IVGN	PKD1
1	-----	-----	-----	-----	MARTTSQLYD	AVPIQSSVVL	CSCPSPSMVR	TQTESSTPPG	IPGGSRQGPA	MDGTAAEPRP	GAGSLQHAQP	NP_002604	
101	PPQPRKKRPE	DFKFGKILGE	GSFSTVVLAR	ELATSREYAI	KILEKRHIK	ENKVPYVTRE	RDVMSRLDHP	FFVKLYFTFQ	DDEKLYFGLS	YAKNGELLKY			
71	PPQPRKKRPE	DFKFGKILGE	GSFSTVVLAR	ELATSREYAI	KILEKRHIK	ENKVPYVTRE	RDVMSRLDHP	FFVKLYFTFQ	DDEKLYFGLS	YAKNGELLKY			
201	IRKIGSFDET	CTRFYTAIEIV	SALEYLHGKG	IIHRDLKPEN	ILLNEDMHIQ	ITDFGTAKVL	SPESKQARAN	SFVGTAQYVS	PELLTEKSAC	KSSDLWALGC			
171	IRKIGSFDET	CTRFYTAIEIV	SALEYLHGKG	IIHRDLKPEN	ILLNEDMHIQ	ITDFGTAKVL	SPESKQARAN	SFVGTAQYVS	PELLTEKSAC	KSSDLWALGC			
301	IIYQLVAGLP	PFRAGNEYLI	FQKIILEYD	FPEKFFPKAR	DLVEKLLVLD	ATKRLGCEEM	EGYGPLKAHP	FFESVTWENL	HQQTTPPKLTA	YLPAMSEDE			
271	IIYQLVAGLP	PFRAGNEYLI	FQKIILEYD	FPEKFFPKAR	DLVEKLLVLD	ATKRLGCEEM	EGYGPLKAHP	FFESVTWENL	HQQTTPPKLTA	YLPAMSEDE			
401	DCYGNYNLL	SQFGCMQVSS	SSSSHLSAS	DTGLPQRS	GS NIEQYIHDLD	SNSFELDLQF	SEDEKRLLE	KQAGGNPWHQ	FVENNLILKM	GPVDKRRKGLF			
371	DCYGNYNLL	SQFGCMQVSS	SSSSHLSAS	DTGLPQRS	GS NIEQYIHDLD	SNSFELDLQF	SEDEKRLLE	KQAGGNPWHQ	FVENNLILKM	GPVDKRRKGLF			
501	ARRRQLLLTE	GPHLYYVDPV	NKVLKGEIPW	SQELRPEAKN	FKTFFVHTPN	RTYYLMDPSG	NAHKWCRKIQ	EVWRQRYQSH	PDAAVQ.				
471	ARRRQLLLTE	GPHLYYVDPV	NKVLKGEIPW	SQELRPEAKN	FKTFFVHTPN	RTYYLMDPSG	NAHKWCRKIQ	EVWRQRYQSH	PDAAVQ				

* highlighted residues denote differences from the reference protein sequence(s).

Shannon Orr

Shannon Orr, Sr. Manager, Quality

Date: 17/Jun/2020

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