

# Certificate of Analysis

## PDK1, 100 µg

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

**ThermoFisher**  
SCIENTIFIC

**Part Number:** PR4194C

**Lot Number:** 1933240D

**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:

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

### Concentration:

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

Calculated **4,040 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.

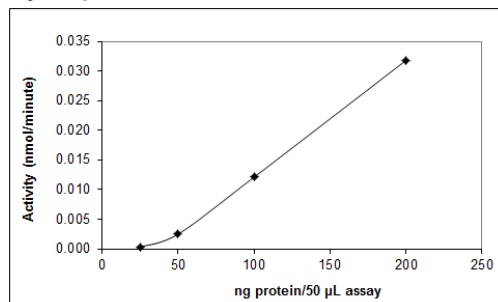
**Can be stored at -20°C for less than one month.**

### 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 MgCl<sub>2</sub>, 2.5 mM DTT, 5 mM EGTA, 200 µM ATP, 100 µM PDK1 substrate (DGVTTKTFAGTPPEYLAPEVRREPRILSEEEQEMFRDFDIADW) and trace [<sup>32</sup>P]-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).

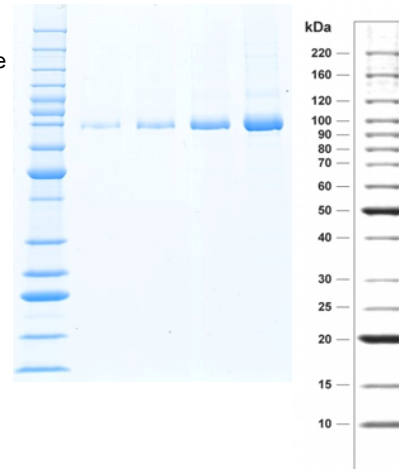
**Lane 1:** Invitrogen™ BenchMark™ Protein Ladder (Catalog #: 10747-012).

**Lane 2:** 0.5 µg PDK1

**Lane 3:** 1 µg PDK1

**Lane 4:** 2.5 µg PDK1

**Lane 5:** 5 µg PDK1



### Purity:

85% as determined by a Coomassie® blue stained SDS-PAGE gel.

### 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

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1 MSYYHHHHH DYDIPTTENL YFQGAMDEP MARTTSQLYD AVPIQSSVVL CSCSPSPMVR TQTESSTPPG IPGGSRQGPA MDGTAAEPRP GAGSLQHAQP IVGN PDK1
1 ----- MARTTSQLYD AVPIQSSVVL CSCSPSPMVR 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 HQQTPPKLTA YLPAMSEDE
271 IIYQLVAGLP PFRAGNEYLI FQKIILEYD FPEKFFPKAR DLVEKLLVLD ATKRLGCEEM EGYGPLKAHP FFESVTWENL HQQTPPKLTA 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 FKTFVHTPN RTYYLMDPSG NAHKWCRKIQ EVWRQRYQSH PDAAVQ.
471 ARRRQLLLTE GPHLYYVDPV NKVLKGEIPW SQELRPEAKN FKTFVHTPN RTYYLMDPSG NAHKWCRKIQ EVWRQRYQSH PDAAVQ
    
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\* highlighted residues denote differences from the reference protein sequence(s).



Anita Targosz, Carlsbad - Engineer, QA

Date: 01/Feb/2018

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