

ProQinase™ CDK16 (mutationally activated)

cyclin dependent kinase 16

Recombinant Human Active Protein Kinase

HGNC Symbol: CDK16

Synonyms: PCTAIRE1, PCTGAIRE

Product No.: 0189-0000-1

Lot: 004

Description: Human CDK16, C-terminal fragment, amino acids R₁₀₇-F₄₉₆ (as in NCBI/Protein entry NP_006192.1) with a S₁₅₃A activating point mutation, N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: CDK16 Lot 004, was confirmed as CDK16 by mass spectroscopy LC-ESI-MS/MS (Protagen AG, Germany)

Theoretical MW_{Fusion Protein}: 74,943 Da

Expression: Baculovirus infected Sf9 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, 15 mM reduced glutathione, 20% glycerol

Storage temperature: -80°C

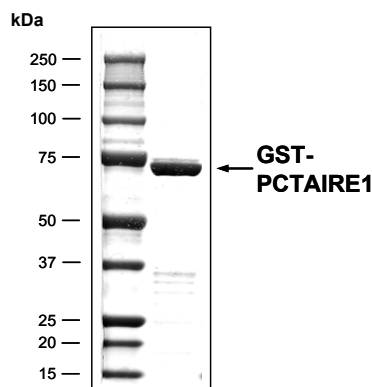
For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.731 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

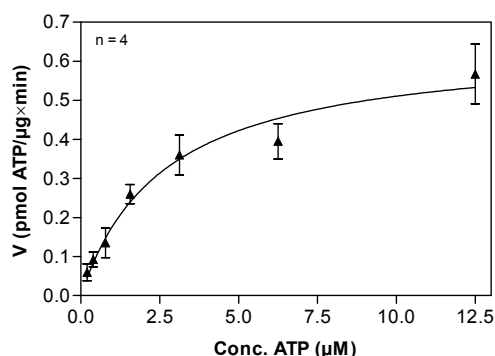
Specific kinase activity (P_i transfer): 0.7 pmol/µg×min
ATP-K_M: 3 µM

**CDK16 Lot 004:
Coomassie stain**



Lot 004, 2.0 µg

**CDK16 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: RB-CTF 50µg/ml
 - Kinase: 1.0 µg / ml
- Filter binding assay
 - MSFC membrane (Millipore)

ProQinase™ CDK16

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CDK16 Recombinant Fusion Protein Amino Acid Sequence

1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARGIQAS	MARKISTEDI	NKRLSLPADI	RLPEGYLEKL	TLNSPIFDKP	300
301	LSRRLRRVAL	SEIGFGKLET	YIKLDKLGEG	TYATVYKGS	KLTDNLVALK	EIRLEHEEGA	360
361	PCTAIREVSL	LKDLKHANIV	TLHDIHTEK	SLTLVFEYLD	KDLKQYLDCC	GNIINMHNK	420
421	LFLFQLLRGL	AYCHRQVLH	RDLKPQNLLI	NERGELKLAD	FGLARAKSIP	TKTYSNEVVT	480
481	LWYRPPDILL	GSTDYSTQID	MWVGVCIFYE	MATGRPLFPG	STVEEQLHFI	FRILGTPTEE	540
541	TWPGILSNEE	FKTYNPKYR	AEALLSHAPR	LDSDGADLLT	KLLQFEGRNR	ISAEDAMKHP	600
601	FFLSLGERIH	KLPDTSIFA	LKEIQLQKEA	SLRSSMPDS	GRPAFRVVDI	EFMT	660

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: CDK16 fragment **boxed**: S153A

CDK16 wt¹ Amino Acid Sequence

1	MDRMKKIKRQ	LSMTLRGGRG	IDKTNGAPEQ	IGLDESAGGG	GSDPGEAPTR	AAPGELRSAR	60
61	GPLSSAPEIV	HEDLKMGSDD	ESDQASATSS	DEVQSPVRVR	MRNHPPRKIS	TEDINKRLSL	120
121	PADIRLPEGY	LEKLTLSPI	FDKPLSRRLR	RVSLSEIGFG	KLETYIKLDK	LGEGTYATVY	180
181	KGKSKLTDNL	VALKEIRLEH	EEGAPCTAIR	EVSLKDLKH	ANIVTLHDII	HTEKSLTLVF	240
241	EYLDKDLKQY	LDDCGNIINM	HNVKLEFLFQL	LRGLAYCHRQ	KVLHRDLKPQ	NLLINERDEL	300
301	KLADFLARA	KSIPTKTYSN	EVVTLWYRPP	DILLGSTDYS	TQIDMWGVC	IFYEMATGRP	360
361	LFPGSTVEEQ	LHFIFRILGT	PTEETWPGIL	SNEEFKTYNY	PKYRAEALLS	HAPRLSDGA	420
421	DLTKLQFE	GRNRISAEDA	MKHPFFLSLG	ERIHKLPTT	SIFALKEIQL	QKEASLRSS	480
481	MPDSGRPAFR	VVDTEF					540

blue: CDK16 sequence expressed in fusion protein **Red**: variant in fusion protein

¹NCBI/Protein accession number NP_006192.1

Recombinant Proteins