

ProQinase™ CDK10/CycQ

cyclin dependent kinase 10

Recombinant Human Active Protein Kinase

HGNC Symbol: CDK10

Synonyms: PISSLRE

Product No.: 1527-1822-1

Lot: 001

Description: Human CDK10, full length, amino acids M₁-P₃₆₀ (as in [NCBI/Protein](#) entry NP_443714.3), and human CycQ (isoform1) amino acids M₁-P₂₄₈ (as in [NCBI/Protein](#) entry NP_689487.29, both N-terminal GST-HIS₆ fusion proteins with a 3C protease cleavage site, co-expressed in Sf9 insect cells

Product identity: CDK10/CycQ Lot 001, was confirmed as CDK10/CycQ by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{GST-CDK10} : 69,128 Da

Theoretical MW_{GST-CycQ} : 57,271 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, 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: 0.378 µg/µl

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

Biochemical Parameters:

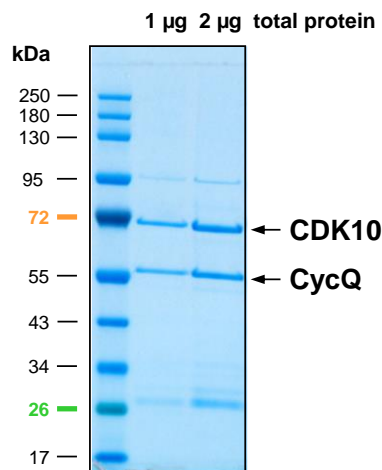
Specific kinase activity (P_i transfer): 8.9 pmol/µg × min

ATP-K_M: 5.2 µM

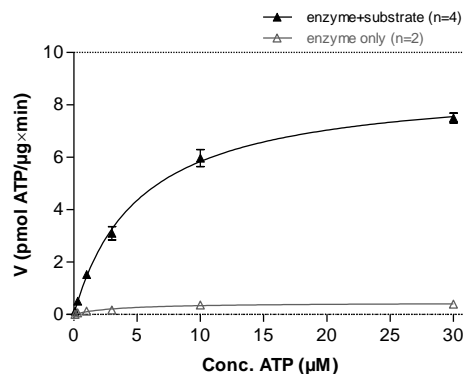
Additional assay technology:

CDK10/CycQ Lot 001 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

CDK10/CycQ Lot 001:
Coomassie stain



CDK10/CycQ Lot 001:
Determination of V_{max} and K_M value for ATP



- 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: RBER-IRStide 40 µg/ml
Kinase: 4 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

ProQinase™ CDK10/CycQ

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GST-CDK10 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RDSLEVLFGQ	240
241	MAEPDLECE	QIRLKCIRKE	GFFTVPPEHR	LGRCRSVKEF	EKLNRIGEGT	YGIVYRARDT	300
301	QTDEIVALKK	VRMDKEKDG	PISSLREITL	LLRLRHPNIV	ELKEVVGNH	LESIFLVMGY	360
361	CEQDLASLLE	NMPTPFSEAQ	VKCIVLQVLR	GLQYLHRNFI	IHRDLKVSNL	LMTDKGCVKT	420
421	ADFGLARAYG	VPVKPMPKPV	VTLWYRAPEL	LLGTTTQTTS	IDMWAVGCIL	AELLAHRPLL	480
481	PGTSEIHQID	LIVQLLGTPS	ENIWPFGSKL	PLVGQYSLRK	QPYNNLKHKF	PWLSEAGLRL	540
541	LHFLFMYDPK	KRATAGDCLE	SSYFKEKPLP	CEPELMPTFP	HHRNKRAAPA	TSEGQSKRCK	600
601	P						660

1-218: GST Red: HIS6-tag Green: 3C cleavage site blue: CDK10

CDK10 wt ¹ Amino Acid Sequence							
1	MAEPDLECEQ	IRLKCIRKEG	FFTVPPEHRL	GRCRSVKEFE	KLNRIGEGTY	GIVYRARDTQ	60
61	TDEIVALKKV	RMDKEKDGIP	ISSLREITLL	LRLRHPNIVE	LKEVVVGNHL	ESIFLVMGYC	120
121	EQDLASLLEN	MPTPFSEAQV	KCIVLQVLRG	LQYLHRNFII	HRDLKVSNLL	MTDKGCVKTA	180
181	DFGLARAYGV	PVKPMPKVVV	TLWYRAPELL	LGTTTQTTSI	DMWAVGCILA	ELLAHRPLL	240
241	GTSEIHQIDL	IVQLLGTPE	NIWPFGSKLP	LVGQYSLRKQ	PYNNLKHKFP	WLSEAGLRL	300
301	HFLFMYDPK	RATAGDCLES	SYFKEKPLPC	EPPELMPTFP	HRNKRAAPAT	SEGQSKRCKP	360

blue: CDK10 sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_443714.3

GST-CycQ Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RDSLEVLFGQ	240
241	PLAMGARGRM	EAPGEGGGGP	AARGPEGQPA	PEARVHFRVA	RFIMEAGVKL	GMRSIPIATA	300
301	CTIYHKFFCE	TNLDAYDPYL	IAMSSIYLAG	KVEEQHLRTR	DIINVSNRYF	NPSGEPLELD	360
361	SRFWELRDSI	VQCELLMLRV	LRFQVSFQHP	HKYLLHYLVS	LQNWLNRHSW	QRTPVAVTAW	420
421	ALLRDSYHGA	LCLRFQAQHI	AVAVLYLALQ	VYGVEVPAEV	EAEKPWWQVF	NDDLTKPIID	480
481	NIIVSDLIQIY	TMDTEIP					540

1-218: GST Green: 3C cleavage site blue: CycQ

CycQ wt ² Amino Acid Sequence							
1	MEAPEGGGGG	PAARGPEGQP	APEARVHFRV	ARFIMEAGVK	LGMRSIPIAT	ACTIYHKFFC	60
61	ETNLDAYDPY	LIAMSSIYLA	GKVEEQHLRT	RDIINVSNRY	FNPSGELEL	DSRFWELRDS	120
121	IVQCELLMLR	VLRFQVSFQH	PHKYLLHYLV	SLQNWLNRHS	WQRTPVAVTA	WALLRDSYHG	180
181	ALCLRFQAQH	IHAVVLYLAL	QVYGVEVPAE	VEAEKPWWQV	FNDLTKPII	DNIVSDLIQI	240
241	YTMDEIP						300

blue: CycQ sequence expressed in recombinant protein

²[NCBI/Protein](#) accession number NP_689487.2

[HGNC](#) identifier CycQ: CCNQ

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