

ProQinase™ CDK3/CycE2 cyclin dependent kinase 3 / Cyclin E2

Recombinant Human Active Protein Kinase

HGNC Symbol: CDK3

Synonyms: CDKN3

Product No.: 0212-2123-1

Lot: 001

Description: Human CDK3, full length, amino acids M₁-H₃₀₅ (as in [NCBI/Protein](#) entry NP_001249.1) N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, and human CycE2, amino acids M₁-H₄₀₄ (as in [NCBI/Protein](#) entry NP_477097.1), N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells.

Product identity: CDK3/CycE2, has been verified by mass spectrometry LC-ESI-MS/MS

Theoretical MW_{GST-CDK3}: 68193 Da
Theoretical MW_{GST-CDK3}: 74847 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

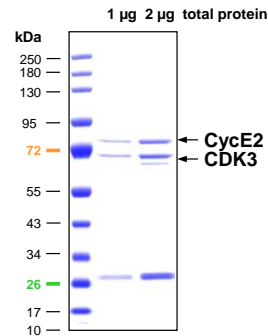
For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.283 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

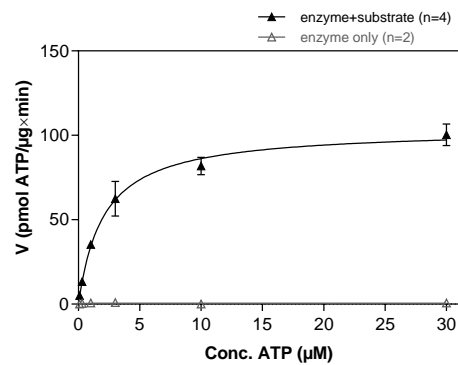
Biochemical Parameters:

Specific kinase activity (P_i transfer): 104 pmol/µg*min
ATP-K_M: 2 µM

**CDK3/CycE2 Lot001:
Coomassie stain**



**CDK3/CycE2 Lot001:
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-GSK3 40 µg/ml
Kinase: 0.5 µg/ml

Assay technology:
Radiometric filter binding assay
MSFC membrane (96 well plate, Millipore)

Recombinant Proteins

Sequence information

GST-CDK3 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQ SMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQG WQATF	GGGDHPPKSD	PMGHHHHHGG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARGIQAS	MGARGRQC DG	YLQNSPLAMD	MFQKVEKIGE	GTYGVVYKAK	300
301	NRETGQLVAL	KKIRLDLEME	GVPSTAI REI	SLLKELKHPN	IVRLLDVVHN	ERKLYLVFEF	360
361	LSQDLKKYMD	STPGSELPLH	LIKS YLFQLL	QGVSFCHSHR	VIHRDLKPQN	LLINELGAIK	420
421	LADFG LARAF	GVPLR TYTHE	VVTLWYRAPE	ILLGSKFYTT	AVDIWSIGCI	FAEMVTRKAL	480
481	FPGDSEIDQL	FRIFRMLGTP	SEDTPWPGVTQ	LPDYKGSF PK	WTRKGLEEIV	PNLEPEGRDL	540
541	LMQLLQYDPS	QRITAKTALA	HPYFSSPEPS	PAARQYVLQR	FRHGKGEFQH	TGARY	600

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: CDK3

CDK3 wt ¹ Amino Acid Sequence							
1	MDMFQKVEKI	GEGTYGVVYK	AKNRETGQLV	ALKKIRLDLE	MEGVPSTAIR	EISLLKELKH	60
61	PNIVRLLDV V	HNERKLYLVF	EFLSQDLK KY	MDSTPGSELP	LHLIKSYLFQ	LLQGVSFCHS	120
121	HRVIHRDLKP	QNLLINELGA	IKLADFG LAR	AFGVPLR TYT	HEVVTLWYRA	PEILLGSKFY	180
181	TTAVDIWSIG	CIFAEMVTRK	ALFPGDSEID	QLFRIFRMLG	TPSEDTPWGV	TQLPDYKGSF	240
241	PKWTRKGLEE	IVPNLEPEGR	DLLMQLLQYD	PSQRITAKTA	LAHPYFSSPE	PSPAARQYVL	300
301	QRFRH						360

blue: CDK3 sequence expressed in recombinant protein

¹NCBI/Protein accession number NP_001249.1

GST-CycE2 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQ SMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPEML	KMFKDR LCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQG WQATF	GGGDHPPKSD	PMGHHHHHGG	RDSLEVL FQG	240
241	MSR RSSLQ	AKQPQPSQT	ESPQEAQIIQ	AKKRKTQDV	KKRREEVTKK	HQYEIRNCWP	300
301	PVLSGGISPC	IIETPHKEI	GTSDFSRFTN	YRFKNLFINP	SPLPDLSWG C	SKEVWLNMLK	360
361	KESRYVHDKH	FEVLHSDLEP	QMSILLDWL	LEVCEVYTLH	RETFYLAQDF	FDRFMLTQKD	420
421	INKNMLQLIG	ITSLFIASKL	EIYAPKLQE	FAYVTDGACS	EEDILRMELI	ILKALKWELC	480
481	PVTIISWLN L	FLQVDALKDA	PKVLLPQYSQ	ETFIQIAQLL	DLCILAI DSI	EFQYRILTAA	540
541	ALCHFTSIEV	VKASGLEWDS	ISECVDWMV	PVNVVKSTS	PVKLKTFKKI	PMEDRHNIQT	600
601	HTNYLAMLEE	VNYINTFRKG	GQLSPVCNGG	IMTPPKSTEK	PPGKH		660

1-218: GST Red: HIS6-tag Green: 3C cleavage site blue: CycE2

CycE2 wt ² Amino Acid Sequence							
1	MSR RSSLQA	KQPQPSQTE	SPQEAQIIQA	KKRKTQDVK	KRREEVTKKH	QYEIRNCWPP	60
61	VLSGGISPCI	IIETPHKEIG	TSDFSRFTNY	RFKNLFINPS	PLPDLSWGCS	KEVWLNMLKK	120
121	ESRYVHDKHF	EVLHSDLEPQ	MRSILLDWLL	EVCEVYTLHR	ETFYLAQDF	DRFMLTQKDI	180
181	NKNMLQLIGI	TSLFIASKLE	EIYAPKLQEF	AYVTDGACSE	EDIILRMELI	LKALKWELCP	240
241	VTIISWLNLF	LQVDALKDAP	KVLLPQYSQE	TFIQIAQLLD	LCILAI DSI	FQYRILTAAA	300
301	LCHFTSIEVV	KKASGLEWDS	ISECVDWMV	FVNVVKSTS	VKLKTFKKIP	MEDRHNIQTH	360
361	TNYLAMLEEV	NYINTFRKGG	QLSPVCNGGI	MTPPKSTEK	PGKH		420

blue: CycE2 sequence expressed in recombinant protein

²NCBI/Protein accession number NP_477097.1
HGNC identifier CycE2: CCNE2