

CDK3/CycC

cyclin dependent kinase 3

Recombinant Human Active Protein Kinase

HGNC Symbol: CDK3

Synonyms: CDKN3

Product No.: 0212-0390-1

Lot: 005

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 CycC, full length, amino acids M₁-S₂₈₃ (as in [NCBI/Protein](#) entry NP_005181.2), N-terminally fused to HIS₆-Thrombin cleavage site, co-expressed in Sf9 insect cells

Product identity: CDK3/CycC Lot 005, was confirmed as CDK3/CycC by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{GST-CDK3}: 68,193 Da

Theoretical MW_{HIS-CycC}: 37,999 Da

Expression host: Sf9 insect cells

Purification: Immobilized Metal 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, 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 10 µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.334 µg/µl

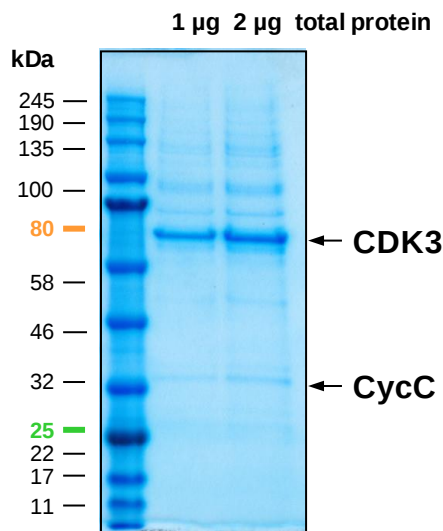
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

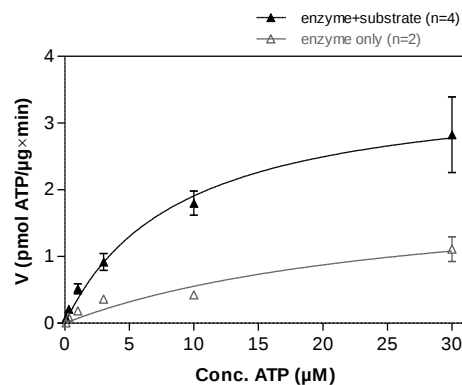
Specific kinase activity (P_i transfer): 3.6 pmol/µg × min

ATP-K_M: 8.8 µM

CDK3/CycC Lot 005:
Coomassie stain



CDK3/CycC Lot 005:
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-CHKtide, 40 µg/ml
Kinase: 4 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

CDK3/CycC

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GST-CDK3 Recombinant Fusion Protein Amino Acid Sequence

1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLIERDEGDK	WRNKKFELGL	EFNLPYYID	60
61	GDVKLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPIQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHH	RRRASVAAGI	240
241	LVPRGPGLD	GIYARGIQAS	MGARGRQCDG	YLQNSPLAMD	MFQKVEKIGE	GTYGVVYKAK	300
301	NRETGQLVAL	KKIRLDLEME	GVPSTAIRES	SLLKELKHPN	IVRLLDVVHN	ERKLYLVFEF	360
361	LSQDLKKYMD	STPGSELPLH	LIKSYLFQLL	QGVSFCHSHR	VIHRDLKPQN	LLINELGAIK	420
421	LADFGLARAF	GVPLRITYTHE	VVTLWYRAPE	ILLGSKFYTT	AVDIWSIGCI	FAEMVTRKAL	480
481	FPGDSEIDQL	FRIFRMLGTP	SEDTWPGVTQ	LPDYKGSFPK	WTRKGLLEIV	PNLEPEGRDL	540
541	LMQLLQYDPS	QRITAKTALA	HPYFSSPEPS	PAARQYVLQR	FRHGKGEFQH	TGARY	600

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

CDK3 wt¹ Amino Acid Sequence

1	MDMFQKEKI	GEGTYGVVYK	AKNRETGQLV	ALKKIRLDLE	MEGVPSTAIR	EISLLKELKH	60
61	PNIVRLLDV	HNERKLYLVF	EFLSQDLKKY	MDSTPGSELP	LHLIKSYLFQ	LLQGVSFCHS	120
121	HRVIHRDLKP	QNLLINELGA	IKLADFGLAR	AFGVPLRTYT	HEVVTWLYRA	PEILLGSKFY	180
181	TTAVDIWSIG	CIFAEMVTRK	ALFPGDSEID	QLFRIFRMLG	TPSEDTWPGV	TQLPDYKGSF	240
241	PKWTRKGLLE	IVPNLEPEGR	DLLMQLLQYD	PSQRITAKTA	LAHPYFSSPE	PSPAARQYVL	300
301	QFRH						360

blue: CDK3 sequence expressed in recombinant protein

¹NCBI/Protein accession number NP_001249.1

HIS-CycC Recombinant Fusion Protein Amino Acid Sequence

1	MSPIDPMGHH	HHHHGRRRAS	VAAGILVPRG	SPGLDGIYAR	GIQASMAGNF	WQSSHYLQWI	60
61	LDKQDLLKER	QKDLKFLSEE	EYWKLIFFT	NVIQALGEHL	KLRQQVIATA	TVYFKRFYAR	120
121	YSLKSIDPVL	MAPTCVFLAS	KVEEFGVVS	TRLIAAATSV	LKTRFSYAFP	KEFPYRMNHI	180
181	LECEFYELLE	MDCCLIVYHP	YRPLLQYVQD	MGQEDMLLPL	AWRIVNDTYR	TDLCLLYPPF	240
241	MIALACLHVA	CVVQOKDARQ	WFAELSVDM	E	KILEIIRVIL	KLYEQWKNFD	300
301	KMPKPKPPPN	SEGEQGPNGS	QNSSYSQS				360

Red: HIS6-tag Pink: Thrombin cleavage site blue: CycC

CycC wt² Amino Acid Sequence

1	MAGNFWQSSH	YLQWILDQD	LLKERQKDLK	FLSEEEYWK	QIFFTNVIA	LGEHLKLRQQ	60
61	VIATATVYFK	RFYARYSLKS	IDPVLMAPTC	VFLASKVEEF	GVVSNTLIA	AATSVLKTRF	120
121	SYAFPKEFPY	RMNHILECEF	YLLELMDCC	IVYHPYRPL	QYVQDMQED	MLLPLAWRIV	180
181	NDTYRTDLCL	LYPPFMIALA	CLHVACVVQ	KDARQWFAEL	SVDMEKILEI	IRVILKLYEQ	240
241	WKNFDERKEM	ATILSKMPKP	KPPPNSEGEQ	GPNGSQNSSY	SQS		300

blue: CycC sequence expressed in recombinant protein

²NCBI/Protein accession number NP_005181.2

HGNC identifier CycC: CCNC