

ProQinase™ CDK3/CycE1

cyclin dependent kinase 3

Recombinant Human Active Protein Kinase

HGNC Symbol: CDK3

Synonyms: CDKN3

Product No.: 0212-0055-1

Lot: 001

Description: Human CDK3, full length, amino acids M₁-H₃₀₅ (as in [NCBI/Protein](#) entry NP_001249.1) and human CycE1, amino acids M₁-A₃₉₅ (as in [NCBI/Protein](#) entry NP_476530.1), both N-terminally fused to GST-Thrombin cleavage site, co-expressed in Sf9 insect cells

Product identity: CDK3/CycE1 Lot 001, was confirmed as CDK3/CycE1 by specific Western Blotting using anti CDK3 and CycE1 antibodies

Theoretical MW_{CDK3}: 68,193 Da

Theoretical MW_{CycE1}: 72,041 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: This kinase was not activated by special procedures

Storage buffer: 50 mM TRIS-HCl pH 8.0, 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: 0.196 µg/µl

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

Biochemical Parameters:

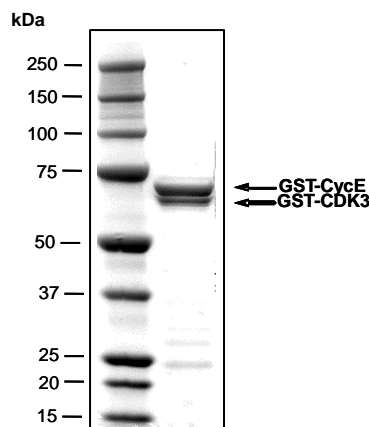
Specific kinase activity (P_i transfer): 112 pmol/µg × min

ATP-K_M: 5.9 µM

Additional assay technology:

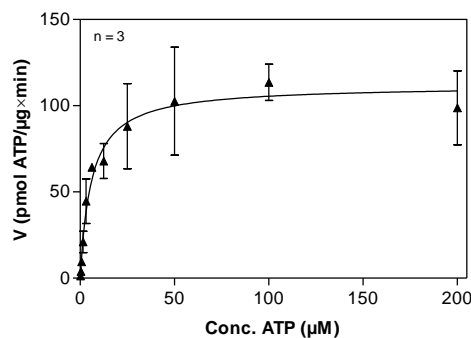
CDK3/CycE1 Lot 001 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

CDK3/CycE1 Lot 001: Coomassie stain



2.0 µg GST-CDK3/CycE

CDK3/CycE1 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: RB-CTF1 100 µg/ml
 - Kinase: 0.2 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

ProQinase™ CDK3/CycE1

Product No.: 0212-0055-1

GST-CDK3 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARGIQAS	MGARGRQCDG	YLQNSPLAMD	MFQKVEKIGE	GTYGVVYKAK	300
301	NRETGQLVAL	KKIRLDLEME	GVPSTAI REI	SLLKELKHPN	IVRLLDVVHN	ERKLYLVFEF	360
361	LSQDLK KYMD	STPGSELPLH	LIKSYLFQLL	QGVSFCHSHR	VIHRDLKPQN	LLINELGAIK	420
421	LADFGLARAF	GVPLR TYTHE	VVTLWYRAPE	ILLGSKFYTT	AVDIWSIGCI	FAEMVTRKAL	480
481	FPGDSEIDQL	FRIFRMLGTP	SEDTWPGVTQ	LPDYKGSFPK	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	MDMFQVEKI	GEGTYGVVYK	AKNRETGQLV	ALKKIRLDLE	MEGVPSTAIR	EISLLKELKH	60
61	PNIVRLLDV	HNERKLYLVF	EFLSQDLK KY	MDSTPGSELP	LHLIKSYLFQ	LLQGVSFCHS	120
121	HRVIHRDLK	QNLLINELGA	IKLADFGLAR	AFGVPLR TYT	HEVVT LWYRA	PEILLGSKFY	180
181	TTAVDIWSIG	CIFAEMVTRK	ALFPGDSEID	QLFRIFRMLG	TPSEDTWPGV	TQLPDYKGSF	240
241	PKWTRKLEE	IVPNLEPEGR	DLLMQLLQYD	PSQRITAKTA	LAHPYFSSPE	PSPAARQYVL	300
301	QRFRH						360

blue: CDK3 sequence expressed in recombinant protein

¹NCBI/Protein accession number NP_001249.1

GST-CycE1 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	LVPRGSPERD	TMKEDGGAEF	240
241	SARSRKRKAN	VTVFLQDPDE	EMAKIDRTAR	DQCGSQPDN	NAVCADPCSL	IPTPKEDDD	300
301	RVYPNSTCKP	RIIAPSRGSP	LPVLSWANRE	EVWKIMLNKE	KTYLRDQHFL	EQHPLLQPKM	360
361	RAILLDWLME	VCEVYKLHRE	TFYLAQDFFD	RYMATQENVV	KTLLQLIGIS	SLFIAAKLEE	420
421	IYPPKLHQFA	YVTDGACSGD	EILTMELMIM	KALKWRLSPL	TIVSWLNVYM	QVAYLNDLHE	480
481	VLLPQYPQOI	FIQIAELLDL	CVLDVDCLEF	PYGILAASAL	YHFSSSELMQ	KVSGYQWCDI	540
541	ENCVKWMPVF	AMVIRETGSS	KLKHFGRVAD	EDAHNIQTHR	DSL DLLDKAR	AKKAMLSEQN	600
601	RASPLPSGLL	TPPQSGKKQS	SGPEMA				660

1-218: GST Pink: Thrombin cleavage site blue: CycE1

CycE1 wt ² Amino Acid Sequence							
1	MKEDGGAEFS	ARSRKRKANV	TVVFLQDPDEE	MAKIDRTARD	QCGSQPDN	AVCADPCSLI	60
61	PTPKEDDDR	VYPNSTCKPR	IIAPSRGSP	PVLSWANREE	VWKIMLNKEK	TYLRDQHFL	120
121	QHPLLQPKMR	AILLDWLMEV	CEVYKLHRET	FYLAQDFFD	YMATQENVVK	TLLQLIGISS	180
181	LFIAAKLEEI	YPPKLHQFAY	VTDGACSGDE	ILTMELMIMK	ALKWRLSPLT	IVSWLNVYMQ	240
241	VAYLNDLHEV	LLPQYPQOIF	IQIAELLDLC	VLDVDCLEF	YGILAASALY	HFSSSELMQ	300
301	VSGYQWCDIE	NCVKWMPFA	MVIRETGSSK	LKHFRGVADE	DAHNIQTHRD	SLDLLDKARA	360
361	KKAMLSEQNR	ASPLPSGLLT	PPQSGKKQSS	GPEMA			420

blue: CycE1 sequence expressed in recombinant protein

²NCBI/Protein accession number NP_476530.1

HGNC identifier: CCNE1

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