

ProQinase™ CDK8/CycC

cyclin dependent kinase 8 / Cyclin C

Recombinant Human Active Protein Kinase

HGNC Symbol: CDK8

Synonyms: K35

Product No.: 0376-0390-1

Lot: 009

Description: Human CDK8, full length, amino acids M₁-Y₄₆₃ (as in [NCBI/Protein](#) entry XP_005266272.1), 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, expressed in Sf9 insect cells

Product identity: CDK8/CycC Lot 009, was confirmed as CDK8/CycC by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{GST-CDK8}: 83051 Da

Theoretical MW_{HIS-CycC}: 37999 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 10 µl are not advisable. Avoid repeated freeze-thaw cycles!

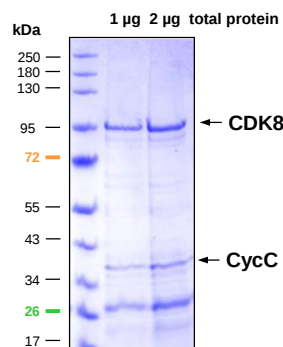
Protein concentration: 0.211 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

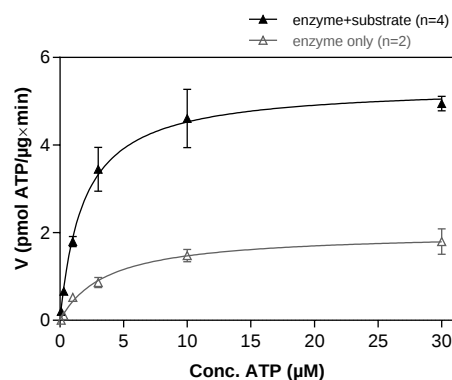
Specific kinase activity (P_i transfer): 5.4 pmol/µg*min

ATP-K_M: 1.8 µM

CDK8/CycC Lot 009:
Coomassie stain



CDK8/CycC Lot 009:
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: 2 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

Sequence information

GST-CDK8 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLIERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMC	DAFPKLVCFK	180
181	KRIEAIPIQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARGIQAS	MDYDFKVKLS	SERERVEDLF	EYEGCKVGRG	TYGHVYKAKR	300
301	KDGKDDKDYA	LKQIEGTGIS	MSACREIAL	RELKHPNVIS	LQKVFLSHAD	RKVWLLFDYA	360
361	EHDLWHIIF	HRASKANKKP	VQLPRGMVKS	LLYQILDGIH	YLHANWVLHR	DLKPANILVM	420
421	GEGPERGRVK	IADMGFARLF	NSPLKPLADL	DPVVVTFWYR	APELLLGARH	YTKAIDIWAI	480
481	GCIFAEELTS	EPIFHCROED	IKTSNPYHHD	QLDRIFNVMG	FPADKWEDI	KKMPEHSTLM	540
541	KDFRRNTYTN	CSLIKMEKH	KVKPDSKAFH	LLQKLLTMDP	IKRITSEQAM	QDPYFLEDPL	600
601	PTSDVFAGCQ	IPYPKREFLT	EEEPDDKGDK	NQQQQQGNNH	TNGTGHPGNQ	DSSHTQGPPL	660
661	KKVRVVPPTT	TSGGLIMTSD	YQRSNPAAAY	PNPGPSTSQP	QSSMGYSATS	QQPPQYSHQT	720
721	HRY						780

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: CDK8

CDK8 wt ¹ Amino Acid Sequence							
1	MDYDFKVKLS	SERERVEDLF	EYEGCKVGRG	TYGHVYKAKR	KDGKDDKDYA	LKQIEGTGIS	60
61	MSACREIAL	RELKHPNVIS	LQKVFLSHAD	RKVWLLFDYA	EHDLWHIIF	HRASKANKKP	120
121	VQLPRGMVKS	LLYQILDGIH	YLHANWVLHR	DLKPANILVM	GEGPERGRVK	IADMGFARLF	180
181	NSPLKPLADL	DPVVVTFWYR	APELLLGARH	YTKAIDIWAI	GCIFAEELTS	EPIFHCROED	240
241	IKTSNPYHHD	QLDRIFNVMG	FPADKWEDI	KKMPEHSTLM	KDFRRNTYTN	CSLIKMEKH	300
301	KVKPDSKAFH	LLQKLLTMDP	IKRITSEQAM	QDPYFLEDPL	PTSDVFAGCQ	IPYPKREFLT	360
361	EEEPDDKGDK	NQQQQQGNNH	TNGTGHPGNQ	DSSHTQGPPL	KKVRVVPPTT	TSGGLIMTSD	420
421	YQRSNPAAAY	PNPGPSTSQP	QSSMGYSATS	QQPPQYSHQT	HR		480

blue: CDK8 sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number XP_005266272.1

HIS-CycC Recombinant Fusion Protein Amino Acid Sequence							
1	MSPIDPMGHH	HHHHGRRRAS	VAAGILVPRG	SPGLDGIYAR	GIQASMAGNF	WQSSHYLQWI	60
61	LDKQDLLKER	QKDLKFLSEE	EYWKLOIFFT	NVIQALGEHL	KLRQQVIATA	TVYFKRFYAR	120
121	YSLKSIDPVL	MAPTCVFLAS	KVEEFGVVS	TRLIAAATSV	LKTRFSYAFP	KEFPYRMNHI	180
181	LECEFYELLE	MDCCLIVYHP	YRPLLQYVQD	MGQEDMLLPL	AWRIVNDTYR	TDLCLLYPPF	240
241	MIALACLHVA	CVVQOKDARQ	WFAELSDME	KILEIIRVIL	KLYEQWKNFD	ERKEMATILS	300
301	KMPKPKPPPN	SEGEQGPNGS	QNSSYSQS				360

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

CycC wt ² Amino Acid Sequence							
1	MAGNFWQSSH	YLQWILDKQD	LLKERQKDLK	FLSEEEYVKL	QIFFTNVIA	LGEHLKLRQQ	60
61	VIATATVYFK	RFYARYSLKS	IDPVLMAPTC	VFLASKVEEF	GVVSNTRLIA	AATSVLKTRF	120
121	SYAFPKEFPY	RMNHILECEF	YLLELMDCC	IVYHYPYRLL	QYVQDMGQED	MLLPLAWRIV	180
181	NDTYRTDLCL	LYPPFMIALA	CLHVACVVQQ	KDARQWFAEL	SVDMEKILEI	IRVILKLYEQ	240
241	WKNFDERKEM	ATILSKMPKP	KPPPNSEGEQ	GPNGSQNSSY	SQS		300

blue: CycC sequence expressed in recombinant protein

²[NCBI/Protein](#) accession number NP_005181.2[HGNC](#) identifier CycC: CCNC