

ProQinase™ CDK20/CycH

cyclin dependent kinase 20

Recombinant Human Active Protein Kinase

HGNC Symbol: CDK20

Synonyms: CAK-kinase p42, CCRK, CDCH, p42, PNQALRE

Product No.: 1528-0360-1

Lot: 007

Description: Human CDK20, amino acids M₁-G₃₄₆ (as in [NCBI/Protein](#) entry NP_001034892.1), N-terminal GST-HIS₆ fusion protein with a 3C cleavage site and human CycH, amino acids M₁-L₃₂₃ (as in [NCBI/Protein](#) entry NP_001230.1), N-terminally fused to HIS₆-Thrombin cleavage site, coexpressed in Sf9 insect cells

Product identity: CDK20/CycH Lot007, was confirmed as CDK20/CycH by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{GST-CDK20}: 66,969 Da

Theoretical MW_{CycH}: 42,400 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

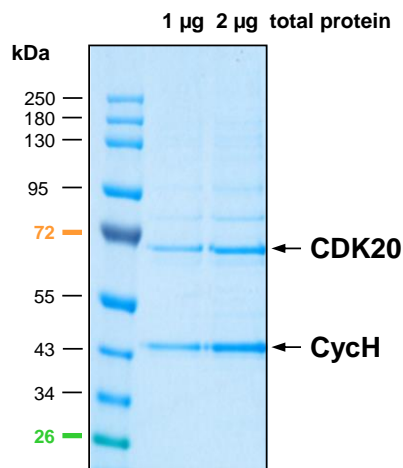
For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.71 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

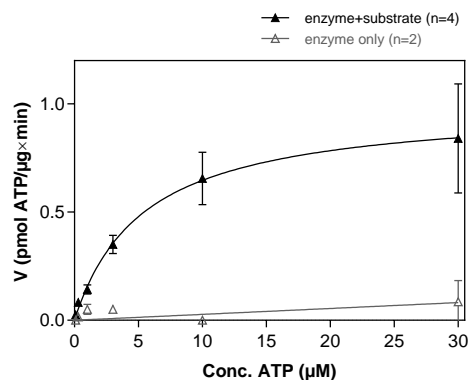
Biochemical Parameters:

Specific kinase activity (P_i transfer): 1 pmol/µg x min
ATP-K_M: 5.4 µM

CDK20/CycH Lot 007: Coomassie stain



CDK20/CycH Lot 007: 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: GSK3-derived peptide 100 µg/ml
 - CDK20/CycH: 4 µg/ml
- Filter binding assay
 - MSPH membrane (Millipore)

Recombinant Proteins

CDK20/CycH

Product No.: 1528-0360-1

Recombinant Proteins

GST-CDK20 Recombinant Fusion Protein Amino Acid Sequence

1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60												
61	GDVKLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120												
121	DFLSKLP	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180												
181	KRIEAI	PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RDSLEVLFGQ	240											
241	PLAMDQY	CIL	GRIGEGA	HGI	VFKAKH	VETG	EIVALKK	VAL	RRLEDG	FPNQ	ALREIKALQE	300							
301	MEDNQY	VVQL	KAVFPH	GGGF	VLA	FEFMLS	D	LA	EVR	RHAQR	PLAQAQ	VKSY	LQMLL	KG	VAF	360			
361	CHANNIV	HRD	LKPANL	LISA	SGQL	KIAD	FG	LARV	SP	DGS	RLYTHQ	VATR	WYRA	PELLY	G	420			
421	ARQYDQ	GVDL	WSVGC	IMGEL	LNGS	PLFP	PK	NDIE	QL	CVL	RILG	TP	NP	QV	WPEL	TE	LPDY	480	
481	NKISF	KEQVP	MPL	EEVLP	DPV	SPQAL	DL	LQ	G	FLLY	PP	HQRI	AASK	ALL	HQY	FFTAP	LP	PAHP	540
541	SELPIP	QRLG	GPAP	KA	HGPG	PHI	HDF	HVDR	PLEE	SLL	NPE	LIRP	FI	E	L	G	600		

1-218: GST Red: HIS6-tag Green: 3C cleavage site blue: CDK20

CDK20 wt¹ Amino Acid Sequence

1	MDQY	CILGRI	GEGA	HIVFK	AKH	VETGEIV	ALKK	VALRRL	EDG	FPNQ	ALR	EIKALQEMED	60							
61	NQYV	VQLKAV	FPH	GGGFVLA	FEF	MSDLAE	VVR	RHAQRPLA	QAQ	VKSYLQ	MLL	KG	VAFCHA	120						
121	NNIV	HRDLKP	ANLL	ISASGQ	LKI	ADFLAR	VFSP	DGSR	LY	THQ	VRWYR	AP	ELLYGARQ	180						
181	YDQ	GVDLWSV	GCIM	GELLNG	SPL	FP	GKNDI	EQL	CVL	RIL	GTP	NPQ	VWPE	LTEL	PDY	NI	240			
241	SFKE	QVP	MPL	EEVLP	DPV	SPQAL	DL	LQ	G	FLLY	PP	HQRI	AASK	ALL	HQY	FFTAP	LP	PAHP	SEL	300
301	PIP	QRLG	GPAP	KA	HGPGPHI	HDF	HVDR	PLEE	SLL	NPELIR	PF	E	L	G	360					

blue: CDK20 sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_001034892.1

HIS-CycH Recombinant Fusion Protein Amino Acid Sequence

1	MSPIDPM	HH	HHH	GRRRAS	VAAGI	LVPRG	SPGL	DGIYAR	GIQAS	MYHNS	SQKR	HWF	FSS	60	
61	EEQLAR	LRAD	ANR	KFRCKAV	ANGK	VLNDP	VFLE	PHEEMT	LCKY	EKRL	EFCS	VFK	PAM	120	
121	PRSV	GTACM	YFKR	FYLNS	VMEY	HPRIIM	LTCA	FLACKV	DEFN	VSSPQF	VGNL	RES	PLG	180	
181	QEKAL	EQILE	YELL	LIQQLN	FHLI	VHNPYR	PFEG	FLIDLK	TRYPI	LENPE	ILRKT	ADDFL	240		
241	NRIAL	TDAYL	LYTP	SQIALT	AILSS	SASRAG	ITMES	YLS	LML	KENRTCL	SQLL	DIM	KSM	300	
301	RNLV	KKYEPP	RSEE	VAVLKQ	KLER	CHSAEL	ALNV	ITK	RRK	GYED	DDYVSK	KSK	HEEE	EWT	360
361	DDDL	VESL	420												

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

CycH wt² Amino Acid Sequence

1	MYHNSS	QKRH	WTF	SSEQLA	RLRAD	ANRKF	RCKAV	ANGKV	LPND	PVFLEP	HEEM	TLC	KYY	60	
61	EKRLL	EFCV	FKP	AMPRSVV	GTAC	MYFKRF	YLNS	VMEYH	PRI	IMLTCAF	LACK	VDEF	NV	120	
121	SSPQ	FVGNLR	ESPL	GQEKAL	EQI	EYELL	IQQL	NFHLIV	HNPYR	PFEGF	LIDL	KTRY	PI	180	
181	LENPE	ILRKT	ADDFL	NRIAL	TDAY	LLYTPS	QIAL	TAILSS	ASRAG	ITMES	YLS	ESL	MLKE	240	
241	NRTCL	SQ	LLD	IMK	SMRNLV	KYEP	RSEEV	AVL	KQK	LERC	HSAEL	ALNVI	TKR	KGYEDD	300
301	DYV	SKSKHE	EEEW	TDDDLV	ESL	360									

blue: CycH sequence expressed in recombinant protein

²[NCBI/Protein](#) accession number NP_001230.1