

Certificate of Analysis

CDK7

cyclin dependent kinase 7

Recombinant Human Protein Kinase

HGNC Symbol: CDK7

Synonyms: CAK1; CDKN7; STK1; p39MO15

Product No.: 0366-0000-1

Lot: 002

Description: Human CDK7, amino acids M₁-F₃₄₆ (as in NCBI/Protein entry NP_001790.1), N-terminal GST-His₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: CDK7, Lot 002, was confirmed as CDK7 by Western Blotting, using a CDK7 specific antibody

Theoretical MW_{Fusion Protein}: 68,934 Da

Expression: Baculovirus infected Sf9 cells

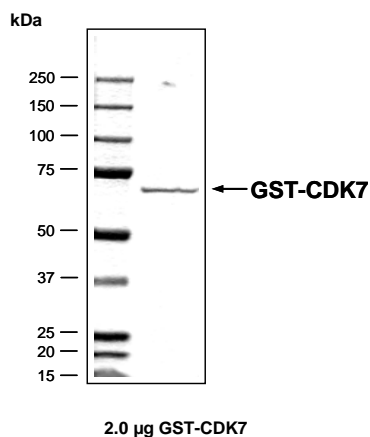
Purification: GST-Affinity Chromatography

Storage buffer: 50 mM Tris pH 8.0, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 20% glycerol

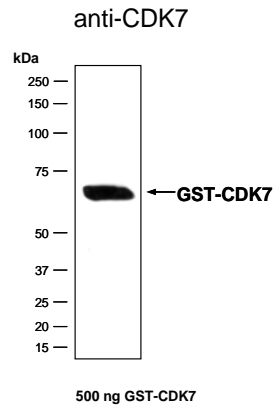
Storage temperature: -80°C
Avoid repeated freeze-thaw cycles!

Protein concentration: 0.424 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

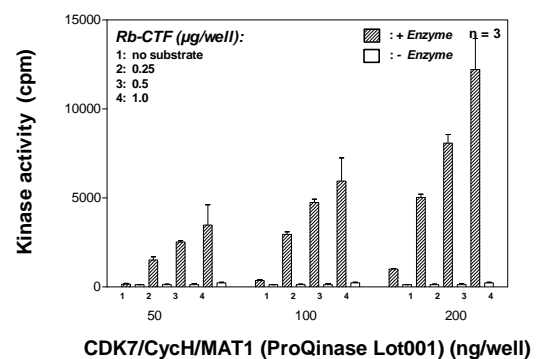
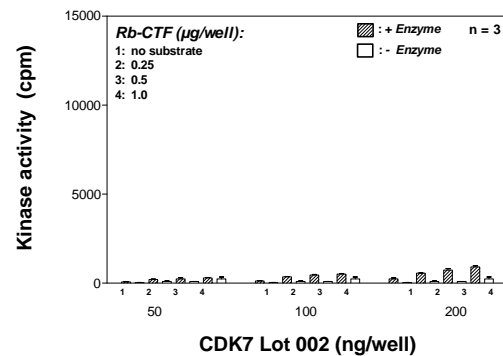
CDK7 Lot 002: Coomassie stain



CDK7 Lot 002: Western Blot Analysis



Kinase activity CDK7 vs active CDK7/CycH/MAT1:



Final assay concentrations:

- 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}
 - 1 µM ATP (610,000 cpm ³³P-γ-ATP)
 - Substrate (variable): RB-CTF
 - Recombinant CDK7 or CDK7/CycH/MAT1 (variable)
- Assay: ³³PanQinase[®] Assay

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CcA V1.0 CDK7_Lot002_V1.doc

CDK7

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CDK7 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSM	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARGIQAS	MALDVKSRAK	RYEKLDLGE	GQFATVYKAR	DKNTNQIVAI	300
301	KKIKLHRSE	AKDGINRTAL	REIKLLQELS	HPNIIGLLDA	FGHKSNISLV	FDFMETDLEV	360
361	IIKDNSLVLT	PSHIKAYMLM	TLQGLEYLHQ	HWILHRDLKP	NNLLLDENG	LKLADFGLAK	420
421	SFGSPNRAYT	HQVVTRWYRA	PELLFGARMY	GVGVDMWAVG	CILAEALLRV	PFLPGDSDL	480
481	QLTRIFETLG	TPTEEQWPDM	CSLPDYVTFK	SFPGIPLHHI	FSAAGDILLD	LIQGLFLFNP	540
541	CARITATQAL	KMKYFSNRPG	PTPGCQLPRP	NCPVETLKEQ	SNPALAIKRK	RTEALEQGGL	600
601	PKKLIF						660

1-218: GST Red: HIS6 Pink: Thrombin blue: CDK7 fragment

CDK7 wt ¹ amino acid sequence							
1	MALDVKSRAK	RYEKLDLGE	GQFATVYKAR	DKNTNQIVAI	KKIKLHRSE	AKDGINRTAL	60
61	REIKLLQELS	HPNIIGLLDA	FGHKSNISLV	FDFMETDLEV	IIKDNSLVLT	PSHIKAYMLM	120
121	TLQGLEYLHQ	HWILHRDLKP	NNLLLDENG	LKLADFGLAK	SFGSPNRAYT	HQVVTRWYRA	180
181	PELLFGARMY	GVGVDMWAVG	CILAEALLRV	PFLPGDSDL	QLTRIFETLG	TPTEEQWPDM	240
241	CSLPDYVTFK	SFPGIPLHHI	FSAAGDILLD	LIQGLFLFNP	CARITATQAL	KMKYFSNRPG	300
301	PTPGCQLPRP	NCPVETLKEQ	SNPALAIKRK	RTEALEQGGL	PKKLIF		360

blue: CDK7 sequence expressed in fusionprotein

¹NCBI/Protein accession number NP_001790.1