Certificate of Analysis

REACTION BIOLOGY

Recombinant Proteins

ProQinase™ CDK1

cyclin dependent kinase 1

Recombinant Human Protein Kinase

HGNC Symbol: CDK1

Synonyms: CDC2, CDC28A

Product No.: 0134-0000-1

Lot: 001

Description: Human CDK1, amino acids M_1-M_{297} (as in NCBI/Protein entry NP_001777.1), N-terminal GST-HIS_6 fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: CDK1 was confirmed as CDK1 by specific Western Blotting

Theoretical $MW_{Fusion\ Protein}$: 63,882 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

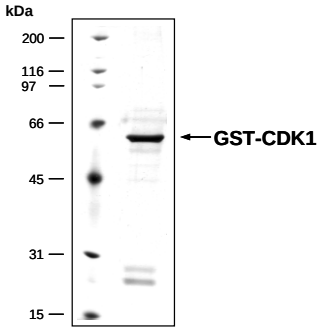
Activation: This kinase was not activated by special procedures

Storage buffer: 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 7.5 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!

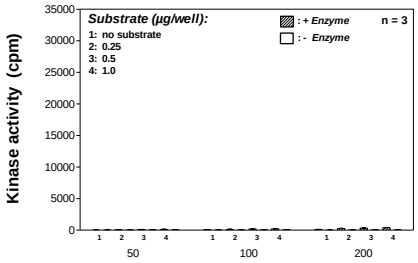
Protein concentration: 0.080 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

CDK1 Lot 001:
Coomassie stain

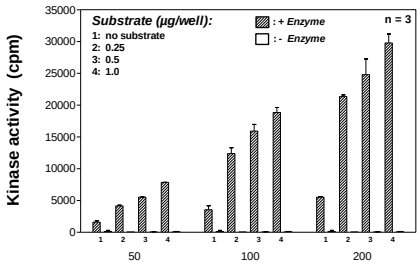


2.0 µg GST-CDK1

Kinase activity CDK1 vs active CDK1/CycB1:



CDK1 Lot 001 (ng/well)



CDK1/CycB1 (ProQinase, Lot 022) (ng/well)

Final assay concentrations:
- 60 mM HEPES-NaOH, pH 7.5
- 3 mM $MgCl_2$
- 3 mM $MnCl_2$
- 3 µM Na-orthovanadate
- 1.2 mM DTT
- 50 µg / ml $PEG_{20.000}$
- 1 µM ATP (610,000 cpm ^{33}P-□-ATP)
- Substrate (variable): Histone H1
- Recombinant CDK1 or CDK1/CycB1 (variable)

Assay: ^{33}PanQinase® Assay

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ProQinase™ CDK1

Product No.: 0134-0000-1

GST-CDK1 Recombinant Fusion Protein Amino Acid Sequence

```
1    MSPILGYWKI KGLVQPTRLL LEYLEEKYEE HLYERDEGDK WRNKKFELGL EFPNLPYYID  60
61   GDVKLTQSMA IIRYIADKHN MLGGCPKERA EISMLEGAVL DIRYGVSRIA YSKDFETLKV  120
121  DFLSKLPEML KMFEDRLCHK TYLNGDHVTH PDFMLYDALD VVLYMDPMCL DAFPKLVCFK  180
181  KRIEAIPQID KYLKSSKYIA WPLQGWQATF GGGDHPPKSD PMGHHHHHHG RRRASVAAGI  240
241  LVPRGSPGLD GICSIEEFTM EDYTKIEKIG EGTYGVVYKG RHKTTGQVVA MKKIRLESGE  300
301  EGVPSTAIRE ISLLKELRHP NIVSLQDVLM QDSRLYLIFE FLSMDLKKYL DSIPPGQYMD  360
361  SSLVKSYLYQ ILQGIVFCHS RRVLHRDLKP QNLLIDDKGT IKLADFGLAR AFGIPIRVYT  420
421  HEVVTLWYRS PEVLLGSARY STPVDIWSIG TIFAELATKK PLFHGDSEID QLFRIFRALG  480
481  TPNNEVWPEV ESLQDYKNTF PKWKPGSLAS HVKNLDENGL DLLSKMLIYD PAKRISGKMA  540
541  LNHPYFNDLD NQIKKM                                                  600
```

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: CDK1 **boxed**: variation from RefSeq

CDK1 wt[1] Amino Acid Sequence

```
1    MEDYTKIEKI GEGTYGVVYK GRHKTTGQVV AMKKIRLESE EEGVPSTAIR EISLLKELRH  60
61   PNIVSLQDVL MQDSRLYLIF EFLSMDLKKY LDSIPPGQYM DSSLVKSYLY QILQGIVFCH  120
121  SRRVLHRDLK PQNLLIDDKG TIKLADFGLA RAFGIPIRVY THEVVTLWYR SPEVLLGSAR  180
181  YSTPVDIWSI GTIFAELATK KPLFHGDSEI DQLFRIFRAL GTPNNEVWPE VESLQDYKNT  240
241  FPKWKPGSLA SHVKNLDENG LDLLSKMLIY DPAKRISGKM ALNHPYFNDL DNQIKKM     300
```

blue: CDK1 sequence expressed in recombinant protein **Red**: variant in recombinant protein

[1]NCBI/Protein accession number NP_001777.1

Recombinant Proteins

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