

# Certificate of Analysis

## CDK8

cyclin dependent kinase 8

Recombinant Human Protein Kinase

HGNC Symbol: CDK8

Synonyms: K35

Product No.: 0376-0000-1

Lot: 001

**Description:** Human CDK8, full length, amino acids M<sub>1</sub>-Y<sub>464</sub> (as in NCBI/Protein entry NP\_001251.1), N-terminal GST fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** CDK8, Lot 001, was confirmed as CDK8 by Western Blotting, using a CDK8 specific antibody

**Theoretical MW<sub>Fusion Protein</sub>:** 83,179 Da

**Expression:** Baculovirus infected Sf9 cells

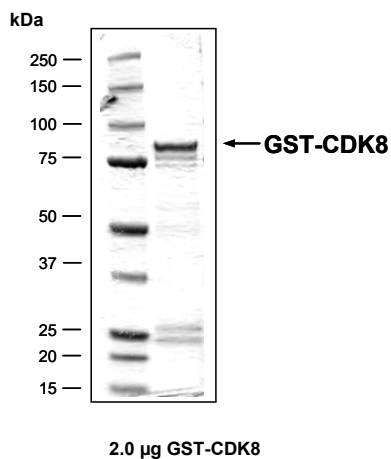
**Purification:** GST-Affinity Chromatography

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

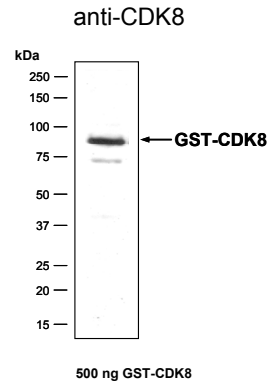
**Storage temperature:** -80°C  
Avoid repeated freeze-thaw cycles!

**Protein concentration:** 0.114 µg/µl  
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

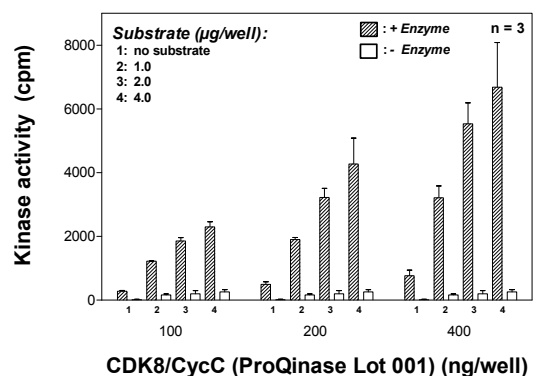
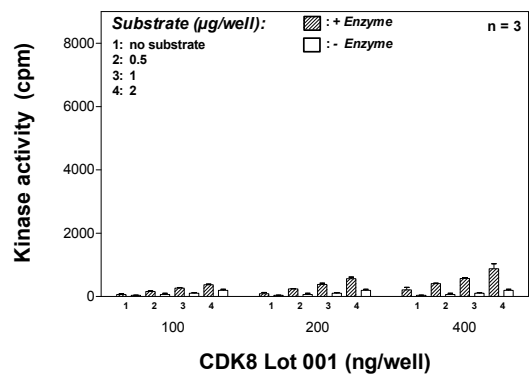
**CDK8 Lot 001:  
Coomassie stain**



**CDK8 Lot 001:  
Western Blot Analysis**



**Kinase activity CDK8 vs active CDK8/CycC:**



**Final assay concentrations:**

- 60 mM HEPES-NaOH, pH 7.5
- 3 mM MgCl<sub>2</sub>
- 3 mM MnCl<sub>2</sub>
- 3 µM Na-orthovanadate
- 1.2 mM DTT
- 50 µg / ml PEG<sub>20,000</sub>
- 1 µM ATP (610,000 cpm <sup>33</sup>P-γ-ATP)
- Substrate (variable): RB-CTF
- Recombinant CDK8 or CDK8/CycC (variable)

**Assay:** <sup>33</sup>PanQinase® Assay

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CoA V1.0 CDK8\_Lot001\_V2.doc

## CDK8

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CDK8 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQ SMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHHG	RRRASVAAGI	240
241	<b>LVPRG</b> SPGLD	GIYARGIQAS	<b>MDYDFVKVLS</b>	<b>SERERVEDLF</b>	<b>EYEGCKVGRG</b>	<b>TYGHVYKAKR</b>	300
301	<b>KDGKDDKDYA</b>	<b>LKQIEGTGIS</b>	<b>MSACREIALL</b>	<b>RELKHPNVIS</b>	<b>LQKVFLSHAD</b>	<b>RKVWLLFDYA</b>	360
361	<b>EHDLWHIIKF</b>	<b>HRASKANKKP</b>	<b>VQLPRGMVKS</b>	<b>LLYQILDGIH</b>	<b>YLHANWVLHR</b>	<b>DLKPANILVM</b>	420
421	<b>GEGPERGRVK</b>	<b>IADMGFARLF</b>	<b>NSPLKPLADL</b>	<b>DPVVVTFWYR</b>	<b>APELLLGARH</b>	<b>YTKAIDIWAI</b>	480
481	<b>GCIFAELLTS</b>	<b>EPIFHCROED</b>	<b>IKTSNPYHHD</b>	<b>QLDRIFNVMG</b>	<b>FPADKWEDI</b>	<b>KKMPEHSTLM</b>	540
541	<b>KDFRRNTYTN</b>	<b>CSLIKYMEKH</b>	<b>KVKPDSKAFH</b>	<b>LLQKLLTMDP</b>	<b>IKRITSEQAM</b>	<b>QDPYFLEDPL</b>	600
601	<b>PTSDVFAGCQ</b>	<b>IPYPKREFLT</b>	<b>EEEPDDKGDK</b>	<b>KNQQQQQGNN</b>	<b>HTNGTGHPGN</b>	<b>QDSSHTQGPP</b>	660
661	<b>LKKVRVPPT</b>	<b>TTSGGLIMTS</b>	<b>DYQRSNP HAA</b>	<b>YPNPGPSTSQ</b>	<b>PQSSMGYSAT</b>	<b>SQPPQYSHQ</b>	720
721	<b>THRY</b>						780

1-218: GST **Red: HIS6-tag** **Green: Thrombin** **blue: CDK8**

CDK8 wt <sup>1</sup> amino acid sequence							
1	<b>MDYDFVKVLS</b>	<b>SERERVEDLF</b>	<b>EYEGCKVGRG</b>	<b>TYGHVYKAKR</b>	<b>KDGKDDKDYA</b>	<b>LKQIEGTGIS</b>	60
61	<b>MSACREIALL</b>	<b>RELKHPNVIS</b>	<b>LQKVFLSHAD</b>	<b>RKVWLLFDYA</b>	<b>EHDLWHIIKF</b>	<b>HRASKANKKP</b>	120
121	<b>VQLPRGMVKS</b>	<b>LLYQILDGIH</b>	<b>YLHANWVLHR</b>	<b>DLKPANILVM</b>	<b>GEGPERGRVK</b>	<b>IADMGFARLF</b>	180
181	<b>NSPLKPLADL</b>	<b>DPVVVTFWYR</b>	<b>APELLLGARH</b>	<b>YTKAIDIWAI</b>	<b>GCIFAELLTS</b>	<b>EPIFHCROED</b>	240
241	<b>IKTSNPYHHD</b>	<b>QLDRIFNVMG</b>	<b>FPADKWEDI</b>	<b>KKMPEHSTLM</b>	<b>KDFRRNTYTN</b>	<b>CSLIKYMEKH</b>	300
301	<b>KVKPDSKAFH</b>	<b>LLQKLLTMDP</b>	<b>IKRITSEQAM</b>	<b>QDPYFLEDPL</b>	<b>PTSDVFAGCQ</b>	<b>IPYPKREFLT</b>	360
361	<b>EEEPDDKGDK</b>	<b>KNQQQQQGNN</b>	<b>HTNGTGHPGN</b>	<b>QDSSHTQGPP</b>	<b>LKKVRVPPT</b>	<b>TTSGGLIMTS</b>	420
421	<b>DYQRSNP HAA</b>	<b>YPNPGPSTSQ</b>	<b>PQSSMGYSAT</b>	<b>SQPPQYSHQ</b>	<b>THRY</b>		480

**blue:** CDK8 sequence expressed in fusionprotein

<sup>1</sup>NCBI/Protein accession number NP\_001251.1