

# Certificate of Analysis

## CDK9

cyclin dependent kinase 9

Recombinant Human Protein Kinase

HGNC Symbol: CDK9

**Synonyms:** C-2k; CDC2L4; PITALRE; TAK; CDC2-related kinase

**Product No.:** 0371-0000-1

**Lot:** 002

**Description:** Human CDK9, amino acids M<sub>1</sub>-F<sub>372</sub> (as in NCBI/Protein entry NP\_001252.1), N-terminal GST- His<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** CDK9, Lot 002, was confirmed as CDK9 by Western Blotting, using a CDK9 specific antibody

**Theoretical MW<sub>Fusion Protein</sub>:** 72,173 Da

**Expression:** Baculovirus infected Sf9 cells

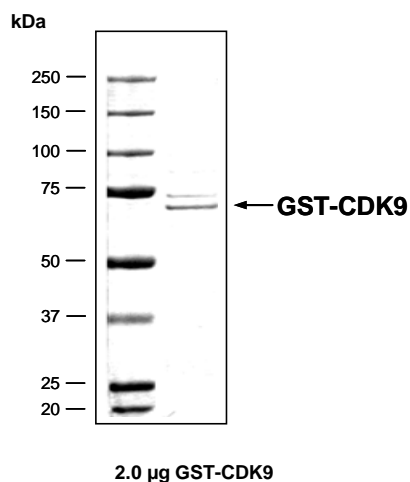
**Purification:** GST-Affinity Chromatography

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

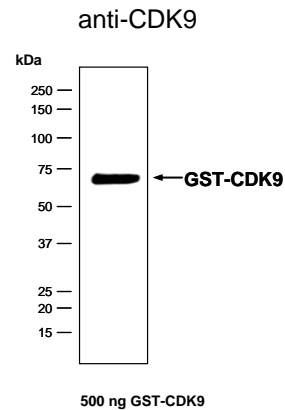
**Storage temperature:** -80°C  
Avoid repeated freeze-thaw cycles!

**Protein concentration:** 0.050 µg/µl  
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

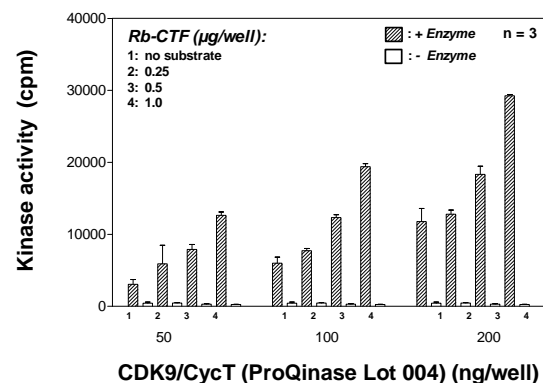
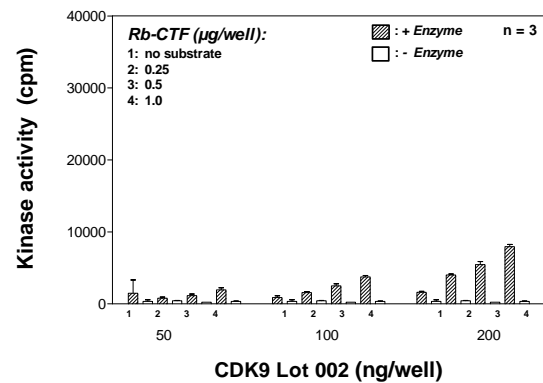
### CDK9 Lot 002: Coomassie stain



### CDK9 Lot 002: Western Blot Analysis



### Kinase activity CDK9 vs active CDK9/CycT:



### 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 CDK9 or CDK9/CycT (variable)

Assay: <sup>33</sup>PanQinase® Assay

This product is for in vitro research use only, not for use in humans or animals. ProQinase disclaims any warranty explicitly or implied that the use of the product or parts of the product is free from third party intellectual property claims unless this is explicitly stated.

CoA V1.0 CDK9\_Lot002\_V1.doc

## CDK9

Product No.: 0371-0000-1

CDK9 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIQID	KYLKSSKYIA	WPLQGQATF	GGGDHPPKSD	PMGHHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GICSRMAKQY	DSVECPFCDE	VSKYEKLAKI	GQGTFGVEVFK	ARHRKTGQKV	300
301	ALKKVLME	KEGFPITALR	EIKILQLLKH	ENVVNLIEIC	RTKASPYNRC	KGSIYLVFDF	360
361	CEHDLAGLLS	NVLVKFTLSE	IKRVMQMLLN	GLYYIHRNKI	LHRDMKAANV	LITRDGVLKL	420
421	ADFLARAFS	LAKNSQPNRY	TNRVVTWYR	PELLLGERD	YGPIDLWGA	GCIMAEMWTR	480
481	SPIMQGNTEQ	HQLALISQLC	GSITPEVWPN	VDNYELYEKL	ELVKGQKRKV	KDRLKAYVRD	540
541	PYALDLIDKL	LVLDPAQRID	SDDALNHDF	WSDPMPDLK	GMLSTHLTSM	FEYLAPPRRK	600
601	GSQITQSTN	QSRNPATTNQ	TEFERVF				660

1-218: GST    Red: HIS6    Pink: Thrombin    blue: CDK9

CDK9 wt <sup>1</sup> amino acid sequence							
1	MAKQYDSVEC	PFCDEVSKYE	KLAKIGQGT	GEVFKARHRK	TGQKVALKKV	LMENEKEGFP	60
61	ITALREIKIL	QLLKHENVVN	LIEICRTKAS	PYNRCKGSIY	LVFDFCEHDL	AGLLSNVLVK	120
121	FTLSEIKRVM	QMLLNGLYYI	HRNKILHRDM	KAANVLITRD	GVLKLADFG	ARAFSLAKNS	180
181	QPNRYTNRV	TLWYRPELL	LGERDYGPPI	DLWGAGCIMA	EMWTRSPIMQ	GNTEQHQLAL	240
241	ISQLCGSITP	EVWPNVDN	LYEKLELVKG	QKRKVKDRK	AYVRDPYALD	LIDKLLVLDP	300
301	AQRIDSDDAL	NHDFWSDPM	PSDLKGMLST	HLTSMFEYLA	PPRRKGSQIT	QQSTNQSRNP	360
361	ATTNQTEFER	VF					420

blue: CDK9 sequence expressed in fusionprotein

<sup>1</sup>NCBI/Protein accession number NP\_001252.1