

Certificate of Analysis

CDK2

cyclin dependent kinase 2

Recombinant Human Protein Kinase

HGNC Symbol: CDK2

Synonyms: p33

Product No.: 0050-0000-1

Lot: 001

Description: Human CDK2, full length, amino acids M₁-L₂₉₈ (as in NCBI/Protein entry NP_001789.2), N-terminal GST fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: CDK2 Lot 001, was confirmed as CDK2 by specific Western blotting

Theoretical MW_{Fusion Protein}: 60,222 Da

Expression: Baculovirus infected Sf9 cells

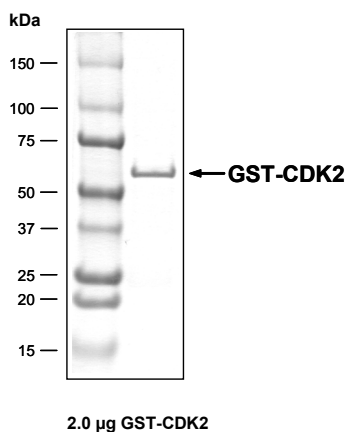
Purification: GST-Affinity Chromatography

Storage buffer: 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 15 mM reduced glutathione, 20% glycerol

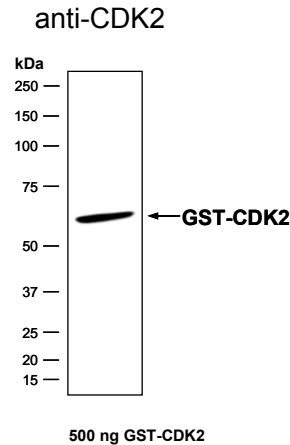
Storage temperature: -80°C
Avoid repeated freeze-thaw cycles!

Protein concentration: 0.193 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

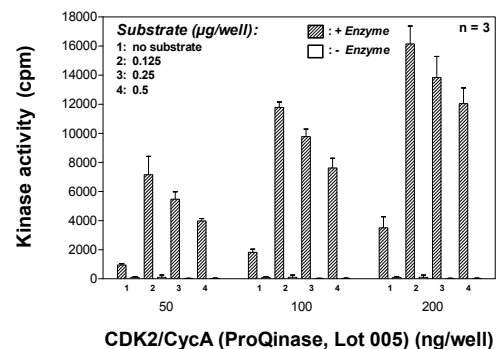
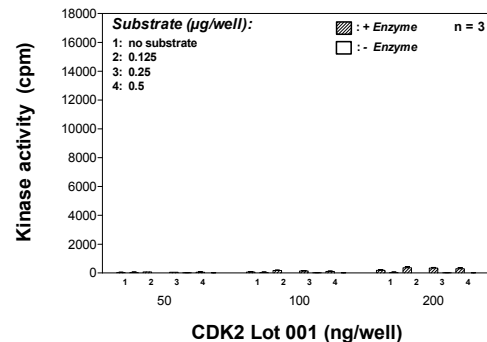
CDK2 Lot 001: Coomassie stain



CDK2 Lot 001: Western Blot Analysis



Kinase activity CDK2 vs active CDK2/CycA:



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): Histone H1
- Recombinant CDK2 or CDK2/CycA (variable)

Assay: ³³PanQinase® Assay

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CoA V1.0 CDK2_Lot001_V1.doc

CDK2

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CDK2 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	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	LVPRGSMENF	QKVEKIGEGT	240
241	YGVVYKARNK	LTGEVVALKK	IRLDTETEGV	PSTAIREISL	LKELNHPNIV	KLLDVIHTEN	300
301	KLYLVFEFLH	QDLKKFMDAS	ALTGIPLPLI	KSylFQLLQG	LAFCHSHRVL	HRDLKPQNLL	360
361	INTEGAIKLA	DFGLARAFGV	PVRTYTHEVV	TLWYRAPEIL	LGCKYYSTAV	DIWSLGCIFA	420
421	EMVTRRALFP	GDSEIDQLFR	IFRTLGTPE	VVWPGVTSMP	DYKPSFPKWA	RQDFSKVVPP	480
481	LDEDGRSLLS	QMLHYDPNKR	ISAKAALAH	FFQDVTKPVP	HLRL		540

1-218: GST **Pink: Thrombin** **blue: CDK2**

CDK2 wt ¹ amino acid sequence							
1	MENFQVEKI	GEGTYGVVYK	ARNKLTGEVV	ALKKIRLDTE	TEGVPSTAIR	EISLLKELNH	60
61	PNIVKLLDVI	HTENKLYLVF	EFLHQDLKFF	MDASALTGIP	LPLIKSYLFQ	LLQGLAFCHS	120
121	HRVLHRDLKP	QNLLINTEGA	IKLADFLAR	AFGVPVRYT	HEVVTLWYRA	PEILLGCKYY	180
181	STAVDIWSLG	CIFAEMVTRR	ALFPDSEID	QLFRIFRTL	TPDEVVWPGV	TSMPDYKPSF	240
241	PKWARQDFSK	VVPLDEDGR	SLLSQMLHYD	PNKRISAKAA	LAHPFFQDVT	KVPVHLRL	300

blue: CDK2 sequence expressed in fusionprotein

¹NCBI/Protein accession number NP_001789.2