

## ProQinase™ CK2-alpha1

casein kinase 2 alpha 1

Recombinant Human Active Protein Kinase

HGNC Symbol: CSNK2A1

Synonyms: CK2A1, CKII, CK II alpha

Product No.: 0124-0000-1

Lot: 003

**Description:** Human CK2-alpha1, full length, amino acids M<sub>1</sub>-Q<sub>391</sub> (as in [NCBI/Protein](#) entry NP\_001886.1), N-terminal GST fusion protein, expressed in Sf9 insect cells

**Product identity:** CK2-alpha1 Lot003, was confirmed as CK2-alpha1 by specific Western blotting

**Theoretical MW**<sub>Fusion Protein</sub>: 70,924 Da

**Expression host:** Sf9 insect cells

**Purification:** GST-Affinity Chromatography

**Activation:** This kinase was not activated by special procedures

**Storage buffer:** 50 mM TRIS-HCl pH 8.0, 100 mM NaCl, 5 mM DTT, 15 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:** 0.480 µg/µl

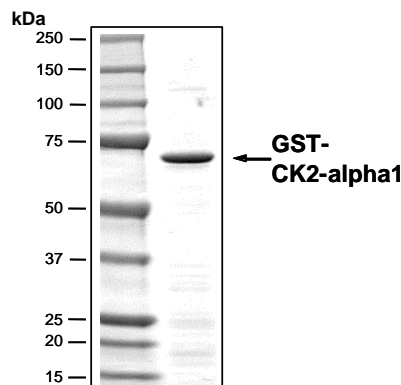
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

### Biochemical Parameters:

Specific kinase activity (P<sub>i</sub> transfer): 5 pmol/µg × min

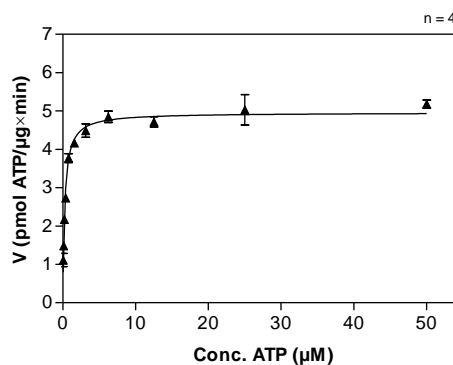
ATP-K<sub>M</sub>: 0.26 µM

### CK2-alpha1 Lot 003: Coomassie stain



2.0 µg CK2-alpha1

### CK2-alpha1 Lot 003: Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP



- Assay conditions:  
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>  
ATP (variable)  
Substrate: Casein 200µg/ml  
Kinase: 4 µg/ml
- Filter binding assay  
MSFC membrane (Millipore)

### Additional assay technology:

CK2-alpha1 Lot 003 was also successfully tested by Reaction Biology for the use with the ADP-Glo™ Kinase assay from Promega ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

## ProQinase™ CK2-alpha1

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GST-CK2-alpha1 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRL	LEYLEEKYEE	HLYERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQG WQATF	GGGDHPPKSD	<b>MSGPVPSRA</b>	<b>RVYTDVNTHR</b>	240
241	<b>PREYWDYESH</b>	<b>VVEWGNQDDY</b>	<b>QLVRKLRGK</b>	<b>YSEVFEAINI</b>	<b>TNNEKVVVKI</b>	<b>LKPVKKKIK</b>	300
301	<b>REIKILENLR</b>	<b>GGPNIIITLAD</b>	<b>IVKDPVSRTP</b>	<b>ALVFEHVNT</b>	<b>DFKQLYQTLT</b>	<b>DYDIRFYMYE</b>	360
361	<b>ILKALDYCHS</b>	<b>MGIMHRDVKP</b>	<b>HNV MIDHEHR</b>	<b>KLRLIDWGLA</b>	<b>EFYHPGQ EYN</b>	<b>VRVASRYFRG</b>	420
421	<b>PELLVDYQMY</b>	<b>DYSLDMWSLG</b>	<b>CMLASMI FRK</b>	<b>EPFFHGHDNY</b>	<b>DQLVRIAKVL</b>	<b>GTEDLYDYID</b>	480
481	<b>KYNIELDPRF</b>	<b>NDILGRHSRK</b>	<b>RWERFVHSEN</b>	<b>QHLVSPEALD</b>	<b>FLDKLLRYDH</b>	<b>QSRLTAREAM</b>	540
541	<b>EHPYFYT VVK</b>	<b>DQARMGSSSM</b>	<b>PGGSTPVSSA</b>	<b>NMSGISSVP</b>	<b>TPSPLGPLAG</b>	<b>SPVIAAANPL</b>	600
601	<b>GMPVPAAGA</b>	<b>QQ</b>					660

1-218: GST    **blue**: CK2-alpha1

CK2-alpha1 wt <sup>1</sup> Amino Acid Sequence							
1	<b>MSGPVPSRAR</b>	<b>VYTDVNTHRP</b>	<b>REYWDYESHV</b>	<b>VEWGNQDDYQ</b>	<b>LVRKLRGKY</b>	<b>SEVFEAINIT</b>	60
61	<b>NNEKVVVKIL</b>	<b>KPVKKKIKR</b>	<b>EIKILENLRG</b>	<b>GPNIITLADI</b>	<b>VKDPVSRTPA</b>	<b>LVFEHVNTD</b>	120
121	<b>FKQLYQTLTD</b>	<b>YDIRFYMYEI</b>	<b>LKALDYCHSM</b>	<b>GIMHRDVKPH</b>	<b>NVMIDHEHRK</b>	<b>LRLIDWGLAE</b>	180
181	<b>FYHPGQ EYNV</b>	<b>RVASRYFRGP</b>	<b>ELLVDYQMYD</b>	<b>YSLDMWSLGC</b>	<b>MLASMI FRKE</b>	<b>PPFFHGHDNYD</b>	240
241	<b>QLVRIAKVLG</b>	<b>TEDLYDYIDK</b>	<b>YNIELDPRFN</b>	<b>DILGRHSRKR</b>	<b>WERFVHSENQ</b>	<b>HLVSPEALDF</b>	300
301	<b>LDKLLRYDHQ</b>	<b>SRLTAREAME</b>	<b>HPYFYT VVKD</b>	<b>QARMGSSSMP</b>	<b>GGSTPVSSAN</b>	<b>MMSGISSVPT</b>	360
361	<b>PSPLGPLAGS</b>	<b>PVIAAANPLG</b>	<b>MPVPAAGA Q</b>				420

**blue**: CK2-alpha1 sequence expressed in recombinant protein

<sup>1</sup>[NCBI/Protein](#) accession number NP\_001886.1