

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 M₁-Q₃₉₁ (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_{Fusion Protein}: 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:

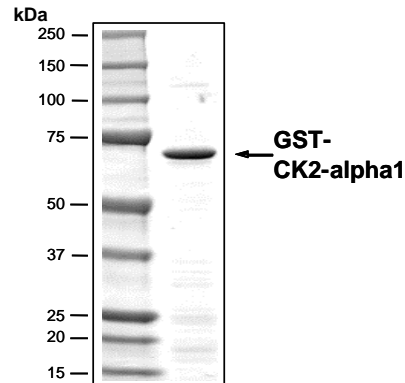
Specific kinase activity (P_i transfer): 5 pmol/µg × min

ATP-K_M: 0.26 µM

Additional assay technology:

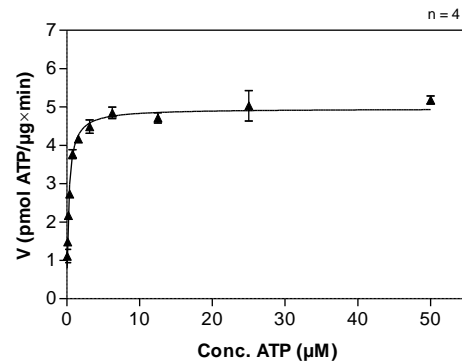
CK2-alpha1 Lot 003 was also successfully tested by ProQinase for the use with the ADP-Glo™ Kinase assay from Promega. ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

CK2-alpha1 Lot 003: Coomassie stain



2.0 µg CK2-alpha1

CK2-alpha1 Lot 003: Determination of V_{max} and K_M value for ATP



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



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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	DFLSKLPPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPOID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	MSGPVPSRA	RVYTDVNTHR	240
241	PREYWDYESH	VVEWGNQDDY	QLVRKLRGK	YSEVFEAINI	TNNEKVVVKI	LKPVKKKIK	300
301	REIKILENLR	GGNIITLAD	IVKDPVSRTP	ALVFEHVNT	DFKQLYQTLT	DYDIRFYMYE	360
361	ILKALDYCHS	MGIMHRDVKP	HNVIMIDHEHR	KLRLIDWGLA	EFYHPGQEYN	VRVASRYFRG	420
421	PELLVDYQMY	DYSLDMWSLG	CMLASMI FRK	EPFFHGH DNY	DQLVRIAKVL	GTEDLYDYID	480
481	KYNIELDPRF	NDILGRHSRK	RWERFVHSEN	QHLVSPEALD	FLDKLLRYDH	QSRLTAREAM	540
541	EHPYFYT VVK	DQARMGSSSM	PGGSTPVSSA	NMSGISSVP	TPSPLGPLAG	SPVIAAANPL	600
601	GMPVPAAGA	QQ					660

1-218: GST **blue**: CK2-alpha1

CK2-alpha1 wt ¹ Amino Acid Sequence							
1	MSGPVPSRAR	VYTDVNTHRP	REYWDYESHV	VEWGNQDDYQ	LVRKLRGKY	SEVFEAINIT	60
61	NNEKVVVKIL	KPVKKKIKR	EIKILENLRG	GPNIITLADI	VKDPVSRTPA	LVFEHVNTD	120
121	FKQLYQTLTD	YDIRFYMYEI	LKALDYCHSM	GIMHRDVKPH	NVMIDHEHRK	LRLIDWGLAE	180
181	FYHPGQEYNV	RVASRYFKGP	ELLVDYQMYD	YSLDMWSLGC	MLASMI FRKE	PPFFHGH DNYD	240
241	QLVRIAKVLG	TEDLYDYIDK	YNIELDPRFN	DILGRHSRKR	WERFVHSENQ	HLVSPEALDF	300
301	LDKLLRYDHQ	SRLTAREAME	HPYFYT VVKD	QARMGSSSMP	GGSTPVSSAN	MMSGISSVPT	360
361	PSPLGPLAGS	PVIAAANPLG	MPVPAAGAQ	Q			420

blue: CK2-alpha1 sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_001886.1