

CK2-alpha2

casein kinase 2 alpha 2

Recombinant Human Active Protein Kinase

HGNC Symbol: CSNK2A2

Synonyms: CK2alpha, CSNK2A1

Product No.: 0412-0000-1

Lot: 001

Description: Human CK2-alpha2, full length, amino acids M₁-R₃₅₀ (as in [NCBI/Protein](#) entry NP_001887.1), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: CK2-alpha2, Lot 001, was confirmed as CK2-alpha2 by specific Western Blotting

Theoretical MW_{Fusion Protein}: 71,109 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, 4 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: 0.715 µg/µl

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

Biochemical Parameters:

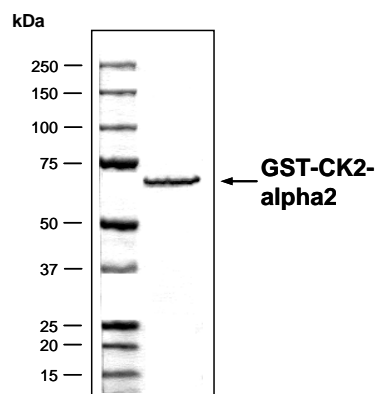
Specific kinase activity (P_i transfer): 2 pmol/µg × min

ATP-K_M: 0.2 µM

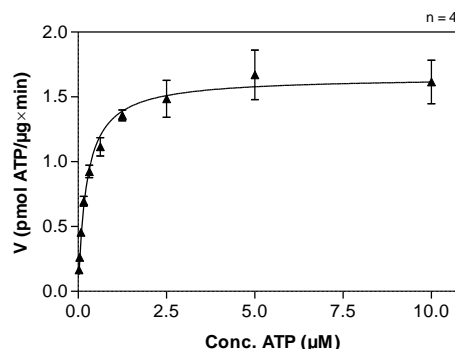
Additional assay technology:

CK2-alpha2 Lot 001 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-alpha2 Lot 001:
Coomassie stain**



**CK2-alpha2 Lot 001:
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 200 µg/ml
 - Kinase: 4 µg/ml
- Filter binding assay
 - MSFC membrane (Millipore)

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GST-CK2-alpha2 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	KRIEAIPIQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARGIQAS	MGPAAAGSRA	RVYAEVNSLR	SREYWDYEAH	VPSWGNQDDY	300
301	QLVRKLGKRGK	YSEVFEAINI	TNNERVVVKI	LKPVKKKKIK	REVKILENLR	GGTNI IKLID	360
361	TVKDPVSKTP	ALVFEYINNT	DFKQLYQILT	DFDIRFYMYE	LLKALDYCHS	KGIMHRDVKP	420
421	HNV MIDHQQK	KLRLIDWGLA	EFYHPAQEYN	VRVASRYFKG	PELLVDYQMY	DYSLDMWSLG	480
481	CMLASMI FRR	EPFFHGQDNY	DQLVRIAKVL	GTEELYG YLK	KYHIDLDPHF	NDILGQHSRK	540
541	RWENFIHSEN	RHLVSPEALD	LLDKLLRYDH	QQR LTAKEAM	EHPYFYPVVK	EQSQPCADNA	600
601	VLSSGLTAAR						660

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: CK2-alpha2

CK2-alpha2 wt ¹ Amino Acid Sequence							
1	MGPAAAGSRA	RVYAEVNSLR	SREYWDYEAH	VPSWGNQDDY	QLVRKLGKRGK	YSEVFEAINI	60
61	TNNERVVVKI	LKPVKKKKIK	REVKILENLR	GGTNI IKLID	TVKDPVSKTP	ALVFEYINNT	120
121	DFKQLYQILT	DFDIRFYMYE	LLKALDYCHS	KGIMHRDVKP	HNV MIDHQQK	KLRLIDWGLA	180
181	EFYHPAQEYN	VRVASRYFKG	PELLVDYQMY	DYSLDMWSLG	CMLASMI FRR	EPFFHGQDNY	240
241	DQLVRIAKVL	GTEELYG YLK	KYHIDLDPHF	NDILGQHSRK	RWENFIHSEN	RHLVSPEALD	300
301	LLDKLLRYDH	QQR LTAKEAM	EHPYFYPVVK	EQSQPCADNA	VLSSGLTAAR		360

blue: CK2-alpha2 sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_001887.1

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