

CSK

C-terminal Src kinase

Recombinant Human Active Protein Kinase

HGNC Symbol: CSK

Synonyms: CYL

Product No.: 0266-0000-1

Lot: 001

Description: Human CSK, full length, amino acids M₁-L₄₅₀ (as in [NCBI/Protein](#) entry NP_004374.1), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: CSK Lot 001, was confirmed as CSK by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 80,215 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: 0.722 µg/µl

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

Biochemical Parameters:

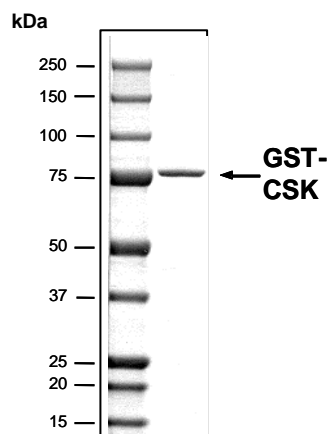
Specific kinase activity (P_i transfer): 83 pmol/µg × min

ATP-K_M: 4 µM

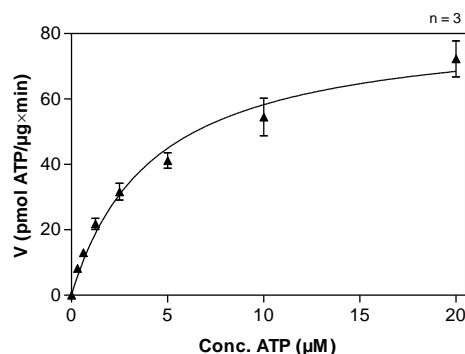
Additional assay technology:

CSK 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

CSK Lot 001: Coomassie stain



CSK Lot 001: Determination of V_{max} and K_M value for ATP



Determination of K_M value & Specific activity:

- 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: Poly(Glu:Tyr)_{4:1} 20 µg/ml
 - Kinase: 0.16 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

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GST-CSK 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	PMGHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GIYARMSAI	QAAWPSGTEC	IAKYNFHGTA	EQDLPFCKGD	VLTIIVAVTKD	300
301	PNWYKAKNKV	GREGIIPANY	VQKREGVKAG	TKLSLMPWFH	GKITREQAER	LLYPETGLF	360
361	LVRESTNYPG	DYTLVSCDG	KVEHYRIMYH	ASKLSIDEEV	YFENLMQLVE	HYTSDADGLC	420
421	TRLIKPKVME	GTVAQDEFY	RSGWALNME	LKLLQTIGKG	EFGDVMLGDY	RGKAVAVKCI	480
481	KNDATAQAF	AEASVMTQLR	HSNLVQLLGV	IVEEKGGLYI	VTEYMAKGS	VDYLRSRGRS	540
541	VLGGDCLLKF	SLDVCEAMEY	LEGNNFVHRD	LAARNVLVSE	DNVAKVSDFG	LTKEASSTQD	600
601	TGKLPVKWTA	PEALREKFS	TKSDVWSFGI	LLWEIYSFGR	VPYPRIPKLD	VVPRVEKGYK	660
661	MDAPDGCPPA	VYEVMKNCWH	LDAAMRPSFL	QLREQLEHIK	THELHL		720

1-218: GST Red: HIS6-tag Pink: Thrombin cleavage site blue: CSK

CSK wt ¹ Amino Acid Sequence							
1	MSAIQAAWPS	GTECIAKYNF	HGTAEQDLPF	CKGDVLTIVA	VTKDPNWKYA	KNKVGREGII	60
61	PANYVQKREG	VKAGTKLSLM	PWFHGKITRE	QAERLLYPPE	TGLFLVREST	NYPGDYTLCV	120
121	SCDGKVEHYR	IMYHASKLSI	DEEVYFENLM	QLVEHYTSDA	DGLCTRLIKP	KVMEGTVAHQ	180
181	DEFYRSGWAL	NMKELLLQT	IGKGEFGDVM	LGDYRGNKVA	VKCIKNDATA	QAFLAEASVM	240
241	TQLRHSNLVQ	LLGVIVEEKG	GLYIVTEYMA	KGSLVDYLR	RGRSVLGGDC	LLKFSLDVCE	300
301	AMEYLEGNF	VHRDLAARNV	LVSEDNVAKV	SDFGLTKEAS	STQDTGKLPV	KWTAPEALRE	360
361	KKFSTKSDVW	SFGILLWEIY	SFGRVPYPRI	PLKDVVPRVE	KGYKMDAPDG	CPPAVYEVMK	420
421	NCWHLDAAMR	PSFLQLREQ	EHIKTHELHL				480

blue: CSK sequence expressed in recombinant protein

¹[NCBI/Protein](https://www.ncbi.nlm.nih.gov/protein/1004374.1) accession number NP_004374.1

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