

ProQinase™ CLK1

CDC-like kinase 1

Recombinant Human Active Protein Kinase

HGNC Symbol: CLK1

Synonyms: CLK, CLK4, STY

Product No.: 0447-0000-1

Lot: 001

Description: Human CLK1, full length, amino acids M₁-I₄₈₄ (as in [NCBI/Protein](#) entry NP_004062.2), N-terminal GST-HIS₆ fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

Product identity: CLK1 Lot 001, was confirmed as CLK1 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 86,695 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: 0.139 µg/µl

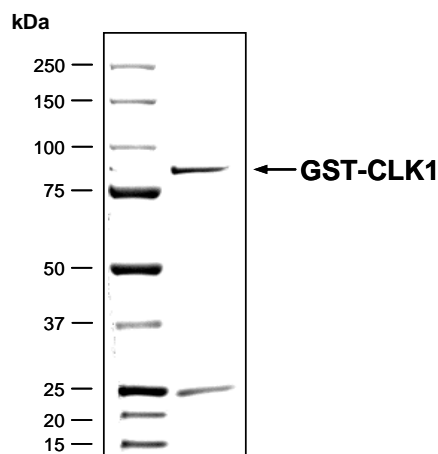
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

Specific kinase activity (P_i transfer): 0.4 pmol/µg × min

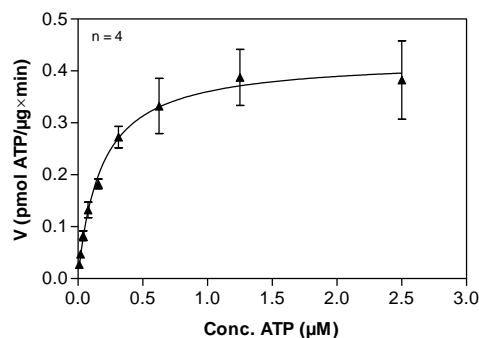
ATP-K_M: 0.2 µM

CLK1 Lot 001: Coomassie stain



2.0 µg GST-CLK1

CLK1 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: RS-peptide, 40 µg/ml
 - Kinase: 1 µg/ml
- Filter binding assay
 - MSPH membrane (Millipore)

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GST-CLK1 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	PMG HHHHHG	RRRASVAAGI	240
241	LVPRG SPGLD	GICSR MRHSK	RTYCPD WDDK	DWDY GKWRSS	SSHRRKRSH	SSA HENKRCK	300
301	YNHSMCD SH	YLESRS SINEK	DYHSRRY IDE	YRNDY TQCE	PGHRQ RDHES	RYQN HSSKSS	360
361	GRSGR SSYKS	KHRIH HSTSH	RRSHG KSHRR	KRTR SVEDE	EGH LICQSGD	VLSAR YEIVD	420
421	TLGEG AFGKV	VECID HKAGG	RHVAV KIVKN	VDRY CEAARS	EIQV LEHLNT	TDPN STFRCV	480
481	QMLEW FEHHG	HICIV FELG	LSTYD FIKEN	GFLP FRLDHI	RKMAY QICKS	VNFL HSNKLT	540
541	HTDLK PENIL	FVQSD YTEAY	NPKIK RDERT	LINP DIKVVD	FGSAT YDDEH	HSTL VSTRHY	600
601	RAPEV ILALG	WSQPC DVWSI	GCILIE YYLG	FTVFP THDSK	EHLAM MERIL	GPLP KHMIQK	660
661	TRKRK YFHHD	RLDW DEHSSA	GRYV SRCKP	LKEFM LSQDV	EHERL FDLIQ	KMLEY DPAKR	720
721	ITLRE ALKHP	FDLL KKSI					780

1-218: GST **Red**: HIS6-tag **Pink**: Thrombin cleavage site **blue**: CLK1 **boxed**: variation from RefSeq

CLK1 wt ¹ Amino Acid Sequence							
1	MRHSK RTYCP	DWDDK DWDYG	KWRSS SSSHKR	RKRSH SSA QE	NKRCK YNHNSK	MCDSH YLESR	60
61	SINEK DYHSR	RYIDE YRNDY	TQCEP GHRQ	RDHES RYQNH	SSKSS GRSGR	SSYK SKHRIH	120
121	HSTSH RRSHG	KSHRR KRTRS	VEDDE EGHLI	CQSGD VLSAR	YEIVD TLGEG	AFGK VVECID	180
181	HKAGG RHVAV	KIVKN VDRYC	EAAR SEIQVL	EHLNT TDPNS	TFRCV QMLEW	FEHGH ICIV	240
241	FELLG LSTYD	FIKEN GFLPF	RLDHI RKMAY	QICKS VNFLH	SNKLT HTDLK	PENIL FVQSD	300
301	YTEAY NPKIK	RDERT LINPD	IKVVD FGSAT	YDDEH HSTLV	STRHY RAPEV	ILALG WSQPC	360
361	DVWSI GCILI	EYYLG FTVFP	THDSK EHLAM	MERIL GPLPK	HMIQK TRKRK	YFHHD RLDWD	420
421	EHSSA GRYVS	RRCKP LKEFM	LSQD VEHERL	FDLIQ KMLEY	DPAKR ITLRE	ALKHP FFDLL	480
481	KKSI						540

blue: CLK1 sequence expressed in recombinant protein **Red**: variant in recombinant protein

¹[NCBI/Protein](#) accession number NP_004062.2