

ProQinase™ CLK1

CDC-like kinase 1

Recombinant Human Active Protein Kinase

HGNC Symbol: CLK1

Synonyms: CLK, CLK4, STY

Product No.: 0447-0000-1

Lot: 006

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 006, has been verified by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 86695 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity Chromatography

Activation: This kinase was not activated by special procedures

Storage buffer: 50 mM HEPES pH 7.5, 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 10 µl are not advisable. Avoid repeated freeze-thaw cycles!

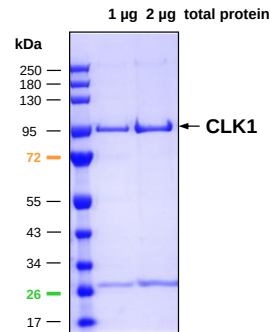
Protein concentration: 0.266 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

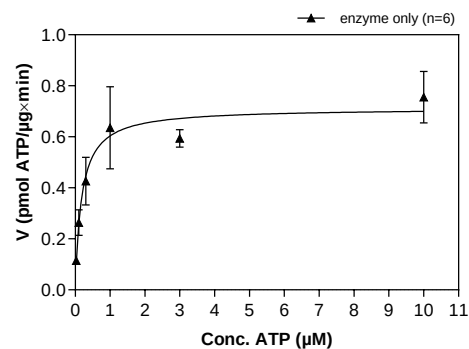
Specific kinase activity (P_i transfer): 0.71 pmol/µg*min

ATP-K_M: 0.2 µM

**CLK1 Lot 006:
Coomassie stain**



**CLK1 Lot 006:
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: no substrate available, autophosphorylation only
 - Kinase: 4 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

Recombinant Proteins

Sequence information

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	DFLSKLPEML	KMFEDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHHG	RRRASVAAGI	240
241	LVPRGSPGLD	GICSRMRHSK	RTYCPDWDDK	DWDYGKWRSS	SSHKRRKRSH	SSAHENKRCK	300
301	YNHSMCDSH	YLESRSINEK	DYHSRRYIDE	YRNDYTQGCE	PGHRQRDHE	RYQNHSSKSS	360
361	GRSGRSSYKS	KHRIHHSTSH	RRSHGKSHRR	KRTRSVEDDE	EGHLICQSGD	VLSARYEIVD	420
421	TLGEGAFGKV	VECIDHKAGG	RHVAVKIVKN	VDRYCEAARS	EIQVLEHLNT	TDPNSTFRCV	480
481	QMLEWFEHHG	HICIVFELLG	LSTYDFIKEN	GFLPFRDLHI	RKMAYQICKS	VNFLHSNKLT	540
541	HTDLKPENIL	FVQSDYTEAY	NPKIKRDERT	LINPDIKVVD	FGSATYDDEH	HSTLVSTRHY	600
601	RAPEVILALG	WSQPCDVWSI	GCILIEYYLG	FTVFPTHDSK	EHLAMMERIL	GPLPKHMIQK	660
661	TRKRKYFHHD	RLDWDEHSSA	GRYVSRRCKP	LKEFMLSQDV	EHRLFDLIQ	KMLEYDPAKR	720
721	ITLREALKHP	FFDLLKCSI					780

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

CLK1 wt ¹ Amino Acid Sequence							
1	MRHSKRTYCP	DWDDKDWDYG	KWRSSSSSHKR	RKRSHSSAQE	NKRCKYNHSH	MCDSHYLESR	60
61	SINEKDYHSR	RYIDEYRNDY	TQGCEPGHRQ	RDHESRYQNH	SSKSSGRSGR	SSYKSKHRIH	120
121	HSTSHRRSHG	KSHRRKRTRS	VEDDEEGHLI	CQSGDVLSAR	YEIVDTLGE	AFGKVVECID	180
181	HKAGGRHVAV	KIVKNVDRYC	EAARSEIQVL	EHLNTTDPNS	TFRCVQMLEW	FEHHGHICIV	240
241	FELLGLSTYD	FIKENGFLPF	RLDHIRKMAY	QICKSVNFLH	SNKLTHTDLK	PENILFVQSD	300
301	YTEAYNPKIK	RDERTLINPD	IKVVDVFGSAT	YDDEHHSTLV	STRHYRAPEV	ILALGWSQPC	360
361	DVWSIGCILI	EYYLGFTVFP	THDSKEHLAM	MERILGPLPK	HMIQKTRKRK	YFHHDRLDWD	420
421	EHSSAGRYVS	RRCKPLKEFM	LSQDVEHERL	FDLIQKMLEY	DPAKRITLRE	ALKHPFFDLL	480
481	KKSI						540

blue: CLK1 sequence expressed in recombinant protein

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