

ProQinaseTM MLK2

mitogen-activated protein kinase kinase kinase 10

Recombinant Human Active Protein Kinase

HGNC Symbol: MAP3K10

Synonyms: MST, MEKK10

Product No.: 2000-0000-1

Lot: 001

Description: Human Kinase, N-terminal fragment, amino acids M₁-P₄₅₀ (as in [NCBI/Protein](#) entry NP_002437.2), N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Product identity: MLK2 Lot 001, has been verified by mass spectrometry LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 78758 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!

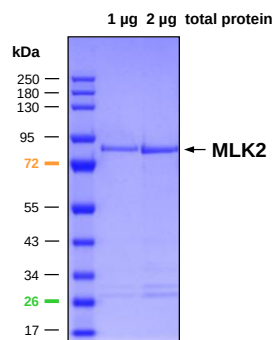
Protein concentration: 0.430 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

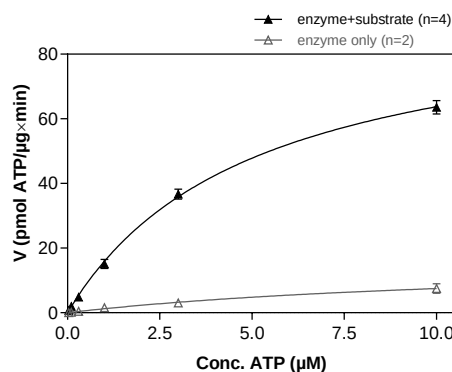
Specific kinase activity (P_i transfer): 96 pmol/µg*min

ATP-K_M: 5 µM

MLK2 Lot 001: Coomassie stain



MLK2 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: Myelin basic protein 20 µg/ml
- Kinase: 1 µg/ml

Assay technology:

Radiometric filter binding assay
MSFC membrane (96 well plate, Millipore)

Sequence information

GST-MLK2 Recombinant Fusion Protein Amino Acid Sequence							
1	MSPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLIERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLP EML	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAI PQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHHG	RDSLEVLFGQ	240
241	MEEEEGAVA	KEWGTTT PGP	VWTAVFDYEA	AGDEELTLRR	GDRVQVLSQD	CAVSGDEGWW	300
301	TGQLPSGRVG	VFPSNYVAPG	APAAPAGLQL	PQEIPFHELQ	LEEIIIGVGGF	GKVYRALWRG	360
361	EEVAVKAARL	DPEKDP AVTA	EQVCQEARLF	GALQHPNIIA	LRGACLNPPH	LCLVMEYARG	420
421	GALSRVLAGR	RVPPHVLVNW	AVQVARGMNY	LHNDAPVPII	HRDLKSINIL	ILEAIENHNL	480
481	ADTVLKITDF	GLAREWHKTT	KMSAAGTYAW	MAPEVIRLSL	FSKSSDVWSF	GVLLWELLTG	540
541	EVFPYREIDAL	AVAYGVAMNK	LTLPIPTSTCP	EPFARLLEEC	WDPDPHGRPD	FGSILKRLEV	600
601	IEQSALFQMP	LESFHS LQED	WKLEIQHMF D	DLRTKEKELR	SREEELLRAA	QEQR FQEEQL	660
661	RRREQELAER	EMDIVERELH	LLMCQLS QEK	P			720

1-218: GST Red: HIS6-tag Green: 3C cleavage site blue: MLK2 fragment

MLK2 wt ¹ Amino Acid Sequence							
1	MEEEEGAVAK	EWGTTT PGPV	WTAVFDY EAA	GDEELTLRRG	DRVQVLSQDC	AVSGDEGWWT	60
61	GQLPSGRGVG	FPSNYVAPGA	PAAPAGLQLP	QEIPFHELQL	EEIIGVGGFG	KVYRALWRGE	120
121	EVAVKAARLD	PEKDP AVTAE	QVCQEARLFG	ALQHPNIIAL	RGACLNPPHL	CLVMEYARGG	180
181	ALSRVLAGRR	VPPHVLV NWA	VQVARGMNYL	HNDAPVPIIH	RDLKSINILI	LEAIENHNL A	240
241	DTVLKITDFG	LAREWHKTTK	MSAAGTYAWM	APEVIRLSLF	SKSSDVWSFG	VLLWELLTGE	300
301	VPYREIDALA	VAYGVAMNKL	TLPIPTSTCPE	PFARLLEECW	DPDPHGRPDF	GSILKRLEVI	360
361	EQSALFQMP L	ESFHS LQEDW	KLEIQHMFDD	LRTKEKELRS	REEELLRAAQ	EQRFQEEQLR	420
421	RREQELAERE	MDIVERELHL	LMCQLS QEKP	RVRKRKG NFK	RSRLKLREG	GSHISLPSGF	480
481	EHKITVQASP	TLDKRKGS DG	ASPPASPSII	PRLRAIRLTP	VDCGSSSSGS	SSGSGTWSR	540
541	GGPPKKEELV	GGKKKGRTWG	PSSTLQKERV	GGEERLKGLG	EGSKQWSSSA	PNLGKSPKHT	600
601	PIAPGFASLN	EMEEFAEAE D	GGSSVPPSPY	STPSYLSVPL	PAEPSPGARA	PWEPTPSAPP	660
661	ARWGHGARRR	CDLALLGCAT	LLGAVGLGAD	VAEARAADGE	EQRRLDGLF	FPRAGRFP RG	720
721	LSPPARPHGR	REDVGPGLGL	APSATLVSL S	SVSDCNSTRS	LLRSDSDEAA	PAAPSPPSP	780
781	PAPTPTSPSP	TNPLVDLELE	SFKKDPRQSL	TPTHVTAACA	VSRGHRRTPS	DGALGQRGPP	840
841	EPAGHGPGPR	DLLDFPRLPD	PQALFPARRR	PPEFPGRPTT	LTFAPRPRPA	ASRRLDPWK	900
901	LVSFGRTLTI	SPPSRPD TPE	SPGPPSVQPT	LLDMDMEGQN	QDSTVPLCGA	HGSH	960

blue: MLK2 sequence expressed in recombinant protein

¹NCBI/Protein accession number NP_002437.2

Recombinant Proteins