

ProQinase™ MAP4K1

mitogen-activated protein kinase kinase kinase 1

Recombinant Human Active Protein Kinase

HGNC Symbol: MAP4K1

Synonyms: HPK1

Product No.: 1941-0000-1

Lot: 002

Description: Human MAP4K1, N-terminal fragment, amino acids M₁-G₃₄₆ (as in [NCBI/Protein](#) entry NP_001036065.1), N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells

Product identity: MAP4K1 Lot 002, has been verified by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 66831 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: 0.171 µg/µl

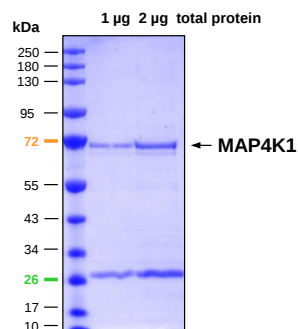
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

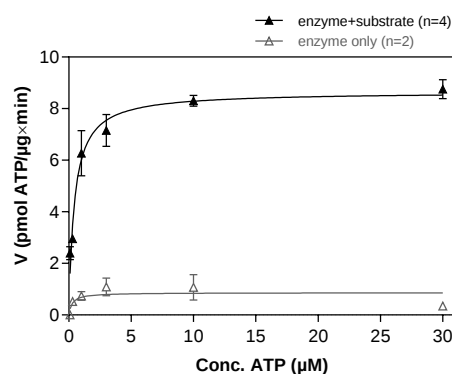
Specific kinase activity (P_i transfer): 8.7 pmol/µg*min

ATP-K_M: 0.44 µM

MAP4K1 Lot 002:
Coomassie stain



MAP4K1 Lot 002:
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 20 µg/ml
 - Kinase: 0.5 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

Sequence information

GST-MAP4K1 Recombinant Fusion Protein Amino Acid Sequence

1	MSPILGYWKI	KGLVQPTRLL	LEYLEEKYEE	HLIERDEGDK	WRNKKFELGL	EFPNLPYYID	60
61	GDVKLTQSMA	IIRYIADKHN	MLGGCPKERA	EISMLEGAVL	DIRYGVSRIA	YSKDFETLKV	120
121	DFLSKLPEML	KMFKDRLCHK	TYLNGDHVTH	PDFMLYDALD	VVLYMDPMCL	DAFPKLVCFK	180
181	KRIEAIPQID	KYLKSSKYIA	WPLQGWQATF	GGGDHPPKSD	PMGHHHHHGG	RDSLEVLFGG	240
241	MDVVDPDIF	NRDPRDHYDL	LQRLGGGTYG	EVFKARDKVS	GDLVALKMKV	MEPDDDVSTL	300
301	QKEILILKTC	RHANIVAYHG	SYLWLQKLWI	CMEFCGAGSL	QDIYQVTGSL	SELQISYVCR	360
361	EVLQGLAYLH	SQKKIHRDIK	GANILINDAG	EVRLADFGIS	AQIGATLARR	LSFIGTPYWM	420
421	APEVAVALK	GGYNELCDIW	SLGITAIELA	ELQPPLFDVH	PLRVFLMTK	SGYQPPRLKE	480
481	KGKWSAAFHN	FIKVTLTSP	KKRPSATKML	SHQLVSQPL	NRGLILDLLD	KLKNPGKGPS	540
541	IGDIEDEEPE	LPPAIPRRIR	STHRSSSLGI	PDADCCRRHM	EFRKLGR		600

1-218: GST Red: HIS6-tag Green: 3C cleavage site blue: MAP4K1 fragment

MAP4K1 wt¹ Amino Acid Sequence

1	MDVVDPDIFN	RDPDRDHYDL	QRLGGGTYGE	VFKARDKVSG	DLVALKMKVM	EPDDDVSTLQ	60
61	KEILILKTCR	HANIVAYHGS	YLWLQKLWIC	MEFCGAGSLQ	DIYQVTGSL	ELQISYVCRE	120
121	VLQGLAYLHS	QKKIHRDIK	ANILINDAGE	VRLADFGISA	QIGATLARRL	SFIGTPYWMA	180
181	PEVAVALK	GYNELCDIWS	LGITAIELAE	LQPPLFDVHP	LRVLFLMTKS	GYQPPRLKEK	240
241	GKWSAAFHNF	IKVTLTSPK	KRPSATKMLS	HQLVSQPLN	RGLILDLLDK	LKNPGKGPSI	300
301	GDIEDEEPEL	PPAIPRRIRS	THRSSSLGIP	DADCCRRHME	FRKLGRMETR	PPANTARLQP	360
361	PRDLRSSSPR	KQLSESSDDD	YDDVDIPTPA	EDTPPPLPPK	PKFRSPSDEG	PGSMGDDGQL	420
421	SPGVLVRCAS	GPPPNSPRPG	PPPSTSSPHL	TAHSEPSLWN	PPSRELDKPP	LLPPKKEKMK	480
481	RKGCALLVKL	FNGCPLRIHS	TAAWTHPSTK	DQHLLLGAE	GIFILNRNDQ	EATLEMLFPS	540
541	RTTWVYSINN	VLMSLSGKTP	HLYSHSILGL	LERKETRAGN	PIAHISPHRL	LARKNMVSTK	600
601	IQDTKGCRAC	CVAEGASSGG	PFLCGALET	VVLLQWYQPM	NKFLLRQVL	FPLPTPLSVF	660
661	ALLTGPGSEL	PAVCIGVSPG	RPGKSVLFHT	VRFGALSCWL	GEMSTEHRGP	VQVTQVEEDM	720
721	VMVLMDGSVK	LVTPEGSPVR	GLRTPETPMT	EAVEAVAMVG	GQLQAFWKHG	VQVWALGSDQ	780
781	LLQELRDPTL	TFRLLGSPRP	VVVETRPVDD	PTAPSNLYIQ	E		840

blue: MAP4K1 sequence expressed in recombinant protein

¹NCBI/Protein accession number NP_001036065.1