

ProQinase™ MAP3K1

mitogen-activated protein kinase kinase kinase 1

Recombinant Human Active Protein Kinase

HGNC Symbol: MAP3K1

Synonyms: MAPKKK1, MEKK, MEKK1

Product No.: 1103-0000-1

Lot: 001

Description: Human MAP3K1, C-terminal fragment, amino acids M₁₁₉₃-W₁₅₁₂ (as in [NCBI/Protein](#) entry NP_005912.1), N-terminal 4xFLAG, C-terminal HIS₈ fusion protein, expressed in Sf9 insect cells

Product identity: MAP3K1 LOT 001, has been verified by mass spectrometry LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 41387 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, 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: 0.483 µg/µl

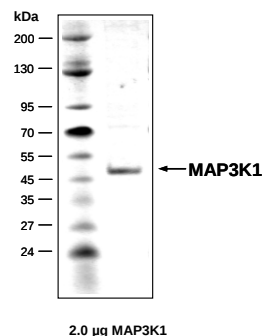
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

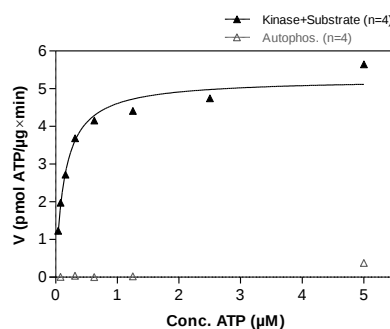
Specific kinase activity (P_i transfer): 5.3 pmol/µg*min

ATP-K_M: 0.14 µM

MAP3K1 LOT 001:
Coomassie stain



MAP3K1 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: Bio-RS-Peptide 100 µg/ml
 - Kinase: 1 µg/ml

Assay technology:
Radiometric filter binding assay
MSPH membrane (96 well plate, Millipore)

Sequence information

MAP3K1 Recombinant Fusion Protein Amino Acid Sequence

1	M	DKDDDDDKD	YKDDDDDKDYK	DDDDDKDYKDD	DDKSGGGSMA	MSASQDALPI	VPQLQVENCE	60
61	D	IIIIIQQDTP	ETLPGHTKAK	QPYREDTEWL	KGQQIGLGAF	SSCYQAQDVG	TGTLMAVKQV	120
121	T	YVRNTSSEQ	EEVVEALREE	IRMMSHLNHP	NIIRMLGATC	EKSNYNLFIE	WMAGGSVAHL	180
181	L	SKYGAFKES	VVINYTEQLL	RGLSYLHENQ	IIHRDVKGAN	LLIDSTGQRL	RIADFGAAAR	240
241	L	ASKGTGAGE	FQGQLLGTTA	FMAPEVLRGQ	QYGRSCDVWS	VGCAIEMAC	AKPPWNAEKH	300
301	S	NHLALIFKI	ASATTAPSIP	SHLSPGLRDV	ALRCLELQPQ	DRPPSRELLK	HPVFRTTWKL	360
361	L	E	HHHHHHHH					420

Pink: 4x FLAG-tag Red: HIS6-tag blue: MAP3K1 fragment

MAP3K1 wt¹ Amino Acid Sequence

1	M	AAAAGNRAS	SSGFPGARAT	SPEAGGGGGA	LKASSAPAAA	AGLLREAGSG	GRERADWRRR	60
61	Q	LRKVRVEL	DQLPEQPLFL	AASPPASSTS	PSPEPADAAG	SGTGFPVAV	PPPHGAASRG	120
121	G	AHLTESVAA	PDSGASSPAA	AEPGEKRAPA	AEPSPAAAAPA	GREMENKETL	KGLHKMDDRP	180
181	E	ERMIREKLK	ATCMPAWKHE	WLERRNRRGP	VVVKPIPVKG	DGSEMNLAA	ESPGEVQASA	240
241	A	SPASKGRRS	PSPGNPSGR	TVKSESPGVR	RKRVSVPVFQ	SGRITPPRRA	PSPDGFSPYS	300
301	P	EETNRRVVK	VMRARLYLLQ	QIGPNSFLIG	GDSPDNKYRV	FIGPQNCSCA	RGTFCIHLLF	360
361	V	MLRVFQLEP	SDPMLWRKTL	KNFEVESLFQ	KYHSRRSSRI	KAPSNTIQK	FVSRMSNSHT	420
421	L	SSSSTSTSS	SENSIKDEEE	QMCPICLLGM	LDEESLTVCE	DGCRNKLHHH	CMSIWAECCR	480
481	R	NREPLICPL	CRSKWRSHDF	YSHELSSPVD	SPSSLRAAQQ	QTVQQQPLAG	SRNQESNFN	540
541	L	THYGTQQIP	PAYKDLAEPW	IQVFGMELVG	CLFSRNWNVR	EMALRRLSHD	VSGALLLANG	600
600	E	STGNSGGSS	GSSPSGGATS	GSSQTSISGD	VVEACCSVLS	MVCADPVYKV	YVAALKTLRA	660
661	M	LVYTPCHSL	AERIKLQRL	QPVVDITLVK	CADANSRTSQ	LSISTLLELC	KGQAGELAVG	720
721	R	EILKAGSIG	IGGVYVNLN	ILGNQTESNN	WQELLGRLCL	IDRLLEFFPA	EFYPHIVSTD	780
781	V	SQAEPVEIR	YKLLLSLLTF	ALQSIDNSHS	MVGKLSRIY	LSSARMVTV	PHVFSKLEEM	840
841	L	SVSSSTHFT	RMRRRLMAIA	DEVEIAEAIQ	LGVEDTLDGQ	QDSFLQASVP	NNYLETTENS	900
901	S	PECTVHLEK	TGKGLCATKL	SASSEDISER	LASISVGPSS	TTTTTTTTTE	QPKPMVQTKG	960
961	R	PHSQCLNSS	PLSHHSQLMF	PALSTPSSST	PSVPAGTATD	VSKHRLQGFI	PCRIPSASPQ	1020
1021	T	QRKFSLQFH	RNCPENKDS	KLSPVFTQSR	PLPSSNIHRP	KPSRPTPGNT	SKQGDPSKNS	1080
1081	M	TLDLNSSSK	CDDSFSGCSN	SSNAVIPSDE	TVFTPVEEKC	RLDVNTELS	SIEDLLEASM	1140
1141	P	SSDTTVTFK	SEVAVLSPEK	AENDDTYKDD	VNHNQKCKEK	MEAEELAA	IAMAMSASQD	1200
1201	A	LPVLPQLQV	ENGEDIIIIQ	QDTPETLPGH	TKAKQPYRED	TEWLKGGQIG	LGAFSSCYQA	1260
1261	Q	DVGTGTLMA	VKQVTYVRNT	SSEQEEVVEA	LREEIRMMSH	LNHPNIIIRML	GATCEKSNYN	1320
1321	L	FIIEWMAGGS	VAHLLSKYGA	FKESVVINYT	EQLLRGLSYL	HENQIIHRDV	KGANLLIDST	1380
1381	G	QRLRIADFG	AAARLASKGT	GAGEFQGQLL	GTIAFMAPEV	LRGQQYGRSC	DVWSVGCAII	1440
1441	E	MACAKPPWN	AEKHSNHLAL	IFKIASATTA	PSIPSHLSPG	LRDVALRCLE	LQPQDRPPSR	1500
1501	E	LLKHPVFRT	TW					1560

blue: MAP3K1 sequence expressed in recombinant protein

¹[NCBI/Protein](https://www.ncbi.nlm.nih.gov/Protein) accession number NP_005912.1