

ProQinase™ MAPKAPK3

mitogen-activated protein kinase-activated protein kinase 3

Recombinant Human Active Protein Kinase

HGNC Symbol: MAPKAPK3

Synonyms: 3PK, MAPKAP

Product No.: 0633-0000-1

Lot: 001

Description: Human MAPKAPK3, full length, amino acids M₁-Q₃₈₂ (as in [NCBI/Protein](#) entry NP_004626.1), untagged, expressed in E.coli

Product identity: MAPKAPK3, Lot 001, was confirmed as MAPKAPK3 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 43,324 Da

Expression host: E.coli

Purification: GST-Affinity Chromatography

Activation: With MKK6 and p38-alpha

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 10µl are not advisable. Avoid repeated freeze-thaw cycles!

Protein concentration: 0.210 µg/µl

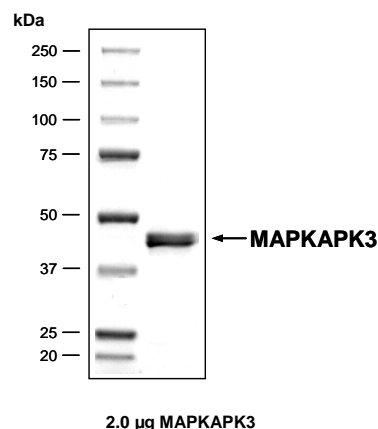
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

Biochemical Parameters:

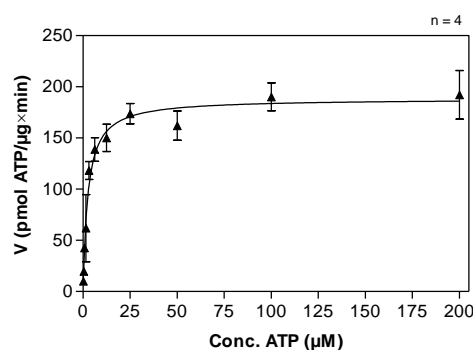
Specific kinase activity (P_i transfer): 188 pmol/µg × min

ATP-K_M: 2.5 µM

MAPKAPK3 Lot 001: Coomassie stain



MAPKAPK3 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: tetra(LRRWSLG) 80 µg/ml
 - Kinase: 2 µg/ml
- Filter binding assay
 - MSPH membrane (Millipore)

ProQinase™ MAPKAPK3

Product No.: 0633-0000-1

MAPKAPK3 Recombinant Protein Amino Acid Sequence							
1	GPLAMDGETA	EEQGGPVPPP	VAPGGPGLGG	APGGRREPCK	YAVTDDYQLS	KQVLGLGVNG	60
61	KVLECFHRRT	GQKCALKLLY	DSPKARQEV	HHWQASGGPH	IVCILDVYEN	MHHGKRCLLI	120
121	IMECMEGGEL	FSRIQERGDQ	AFTEREAAEI	MRDIGTAIQF	LHSHNIAHRD	VKPENLLYTS	180
181	KEKDAVLKLT	DFGFAKETQ	NALQTPCYTP	YYVAPEVLGP	EKYDKSCDMW	SLGVIMYILL	240
241	CGFPPFYSNT	GQAISPGMKR	RIRLGQYGF	NPEWSEVSED	AKQLIRLLLK	TDPTERLTTT	300
301	QFMNHPWINQ	SMVVPQTPH	TARVLQEDKD	HWDEVKEEMT	SALATMRVDY	DQVKIKDLKT	360
361	SNNRLLNKRR	KKQAGSSSAS	QGCNNQ				420

1-4: legacy of tag cleavage **blue**: MAPKAPK3

MAPKAPK3 wt ¹ Amino Acid Sequence							
1	MDGETAEEQG	GPVPPPVAPG	GPGLGGAPGG	RREPKKYAVT	DDYQLSKQVL	GLGVNGKVLE	60
61	CFHRRTGQKC	ALKLLYDSPK	ARQEVDDHWQ	ASGGPHIVCI	LDVYENMHHG	KRCLLIIMEC	120
121	MEGGELFSRI	QERGDQAFTE	REAAEIMRDI	GTAIQFLHSH	NIAHRDVKPE	NLLYTSKEKD	180
181	AVLKLTDGFG	AKETTONALQ	TPCYTPYYVA	PEVLGPEKYD	KSCDMWSLGV	IMYILLCGFP	240
241	PFYSNTGQAI	SPGMKRRIRL	GQYGFNPPEW	SEVSEDAKQL	IRLLKTDPT	ERLTITQFMN	300
301	HPWINQSMVV	PQTPLHTARV	LQEDKDHWE	VKEEMTSALA	TMRVDYDQVK	IKDLKTSNNR	360
361	LLNKRKQQA	GSSSASQGCN	NQ				420

blue: MAPKAPK3 sequence expressed in recombinant protein

¹[NCBI/Protein](#) accession number NP_004626.1