

MEK1 (non activated)

mitogen-activated protein kinase kinase 1

Recombinant Human Protein Kinase

HGNC Symbol: MAP2K1

Synonyms: PRKMK1, MAP2K1, MKK1

Product No.: 0550-0000-1

Lot: 003

Description: Human MEK1, full length, amino acids M₁-V₃₉₃ (as in [NCBI/Protein](#) entry NP_002746.1), N-terminal HIS₆ fusion protein with a Thrombin and TEV cleavage site, expressed in Sf9 insect cells

Product identity: MEK1 Lot 003, was confirmed as MEK1 by MEK1 specific Western blotting

Theoretical MW_{Fusion Protein}: 48,061 Da

Expression host: Sf9 insect cells

Purification: Immobilized Metal 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

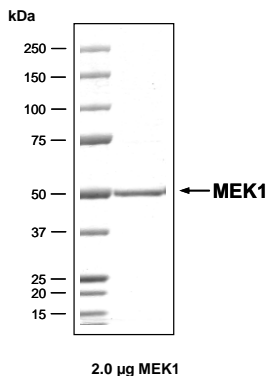
Storage temperature: -80°C

For complete recovery, mix well and spin before use. Product must not be stored in diluted solutions, aliquots below 10µl are not advisable. Avoid repeated freeze-thaw cycles!

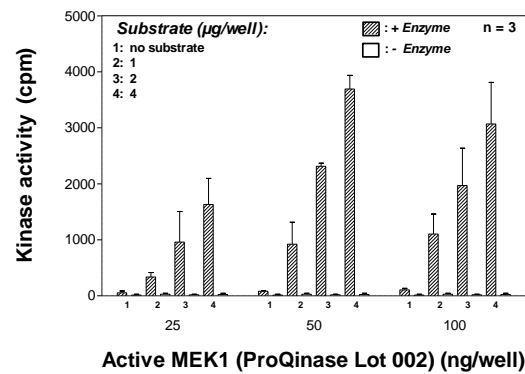
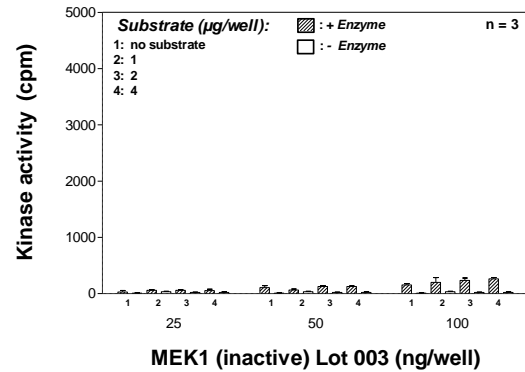
Protein concentration: 0.594 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

MEK1 (non activated) Lot 003:

Coomassie stain



Kinase activity MEK1 (inactive) vs active MEK1:



³³PanQinase® 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}
- 1 µM ATP (800,000 cpm ³³P-γ-ATP)
- Substrate: ERK2 K54R
- Recombinant MEK1 (inactive) or active MEK1 (activated by B-RAF)

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HIS-MEK1 Recombinant Fusion Protein Amino Acid Sequence												
1	MSPIDPMG	HH	HHH	GRRRAS	VAAGI	LVPRG	SPGLDGIYAR	TENLYFQ	GAM	I	KKKPTPIQL	60
61	NPAPDGS	AVN	GTSSA	ETNLE	ALQK	LEELE	LDEQQR	KRLE	AFLTQ	KQKVG	ELKDDDFEKI	120
121	SELGAGN	GGV	VFKV	SHKPSG	LVMAR	KLIHL	EIKPAIR	NQI	IRELQ	VLHEC	NSPYIVGFY	180
181	AFYSDG	EISI	CMEHM	DGGSL	DQVL	KKAGRI	PEQIL	GKVS	AVIKG	LTYLR	EKKIMHRDV	240
241	KPSNIL	VNSR	GEIKL	CDGFV	SGQL	IDSMA	SFVGT	RSYMS	PERLQ	GTHYS	VQSDIWSMGL	300
301	SLVEMA	VGRY	PIPPD	AKEL	ELMFG	CQVEG	DAAET	PPRPR	TPGR	PLSSYG	MDSRPPMAIF	360
361	ELLDYI	VNEP	PPKL	PSGVFS	LEFQD	FVNKC	LIKNP	AERAD	LKQL	MVHAFI	KRSDAEEVDF	420
421	AGWLC	STIGL	NQPST	PTHAA	GV							480

Red: HIS6-tag Pink: Thrombin cleavage site Green: TEV cleavage site blue: MEK1 boxed: variation from RefSeq

MEK1 wt ¹ Amino Acid Sequence													
1	MP	KKKPTPIQ	LNPAPDGS	AVN	NGTSSA	ETNLE	EALQK	LEEL	ELDEQ	QRKRL	EAF	LTKQKQV	60
61	GELKDDDFEK	I	SELGAGNGG	VVFKVSHKPS	GLVMAR	KLIH	LEIKPAIR	NQ	I	RELQVLHE			120
121	CNSPYIVGFY	G	AFYSDGEIS	ICMEHMDGGS	LDQVL	KKAGR	IPEQIL	GKVS	I	AVIKGLTYL			180
181	REKHKIMHRD	V	KPSNILVNS	RGEIKL	CDFG	VSGQL	IDSMA	NSFVGT	RSYM	S	PERLQ	GTHY	240
241	SVQSDIWSMG	L	SLVEMA	VGRY	YPIPPD	AKE	LELMFG	CQVE	G	DAAET	PPRP	RTPGRPLSSY	300
301	GMSRPPMAI	F	ELLDYIVNE	PPPKL	PSGVF	SLEFQD	FVNK	CLIKN	PAERA	DL	QLMVHAF		360
361	IKRSDAEEVD	F	AGWLC	STIGL	LNQPST	PTHA	AGV						420

blue: MEK1 sequence expressed in recombinant protein Red: variant in recombinant protein

¹[NCBI/Protein](https://www.ncbi.nlm.nih.gov/protein/NP_002746.1) accession number NP_002746.1

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