

MEK1 wt

MAPK / ERK activating kinase

Recombinant Human Active Protein Kinase

HGNC Symbol: MAP2K1

Synonyms: MAP2K1, MKK1

Product No.: 0550-0000-3

Lot: 002

Description: Human MEK1 wt, full length, amino acids M₁-V₃₉₃ (as in [NCBI/Protein](#) entry NP_002746.1), activated, untagged, expressed in Sf9 insect cells

Product identity: MEK1 wt, Lot 002, was confirmed as MEK1 by mass spectroscopy LC-ESI-MS/MS

Theoretical MW_{Fusion Protein}: 43,569 Da

Expression host: Sf9 insect cells

Purification: Immobilized Metal Affinity Chromatography

Activation: with B-RAF

Storage buffer: 50 mM HEPES pH 7.5, 100 mM NaCl, 3 mM 2-Mercaptoethanol, 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: 0.925 µg/µl
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

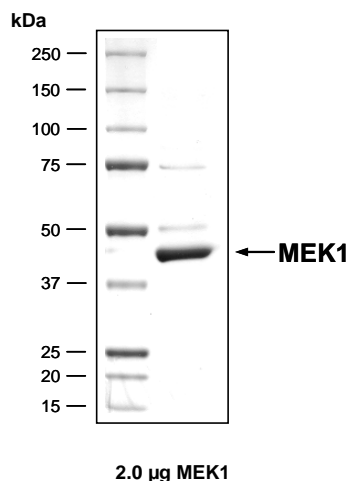
Biochemical Parameters:

Specific kinase activity (P_i transfer): 297 pmol/µg × min
ATP-K_M: 1.4 µM

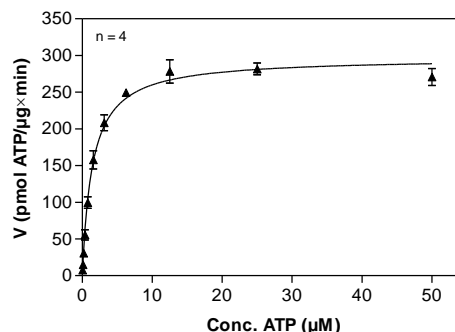
Additional assay technology:

MEK1 wt Lot002 was also successfully tested by ProQinase for the use with the ADP-Glo™ Kinase assay from Promega
ADP-Glo assay conditions may vary from radiometric assay conditions, please inquire for assay details

MEK1 wt Lot002: Coomassie stain



MEK1 wt Lot002: 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
 - 2.5 µg / 50 µl PEG_{20,000}
 - ATP (variable)
 - Substrate: ERK2-K54R 100 µg/ml
 - MEK1: 1 µg/ml
- Filter binding assay
MSFC membrane (Millipore)

MEK1 wt

Product No.: 0550-0000-3

MEK1 wt Recombinant Fusion Protein Amino Acid Sequence							
1	GAM	KKKPTP	IQLNPAPDGS	AVNGTSSAET	NLEALQKKLE	ELELDEQQRK RLEAFLTQKQ	60
61	KVGELKDDDF	EKISELGAGN	GGVVFVSHK	PSGLVMARKL	IHLEIKPAIR	NQIIRELQVL	120
121	HECNSPYIVG	FYGAFYS DGE	ISICMEHMDG	GSLDQVLKKA	GRIPEQILGK	VSIIVIKGLT	180
181	YLREKHKIMH	RDVKPSNILV	NSRGEIKLCD	FGVSGQLIDS	MANSFVGTRS	YMSPERLQGT	240
241	HYSVQSDIWS	MGLSLVEMAV	GRYPPIPPDA	KELELMFGCQ	VEGDAAETPP	RPRTPGRPLS	300
301	SYGMDSRPPM	AIFELLDYIV	NEPPP K LPSG	VFSLEFQDFV	NKCLIKNPAE	RADLKQLMVH	360
361	AFIKRSDAEE	VDFAGWLCST	IGLNQPS TPT	HAAGV			420

blue: MEK1 boxed: variation from RefSeq

MEK1 wt ¹ Amino Acid Sequence							
1	MP	KKKPTPIQ	LNPAPDGS AV	NGTSSAETNL	EALQKKLEEL	ELDEQQRKRL EAFLTQKQV	60
61	GELKDDDFEK	ISELGAGNGG	VVFKVSHKPS	GLVMARKLIH	LEIKPAIRNQ	IIRELQVLHE	120
121	CNSPYIVGFY	GAFYS DGEIS	ICMEHMDGGS	LDQVLKKAGR	IPEQILGKVS	IIVIKGLTYL	180
181	REKHKIMHRD	VKPSNILVNS	RGEIKLCDFG	VSGQLIDSMA	NSFVGT RSYM	SPERLQ GTHY	240
241	SVQSDIWSMG	LSLVEMAVGR	YPIPPPD AKE	LELMFGCQVE	GDAAE T PPRP	RTPGRPLSSY	300
301	GMDSRPPMAI	FELLDYIVNE	PPP K LPSGVF	SLEFQDFVNK	CLIKNPAERA	DLKQLMVHAF	360
361	IKRSDAEEVD	FAGWLCSTIG	LNQPS TPT	HAAGV			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

This product was manufactured at ProQinase in Freiburg, Germany, and is for in vitro research use only, not for use in humans or animals. ProQinase disclaims any warranty explicitly or implied that the use of the product or parts of the product is free from third party intellectual property claims unless this is explicitly stated.