

ProQinase[™] 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 M_1 -V₃₉₃ (as in <u>NCBI/Protein</u> 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/ μ g × min ATP-K_M: 1.4 μ M

MEK1 wt Lot002: Coomassie stain



2.0 µg MEK1

MEK1 wt Lot002: Determination of V_{max} and K_M value for ATP



Determination of $K_{\ensuremath{\mathsf{M}}}$ 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)

Additional assay technology:

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

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Version 001

ProQinase[™] MEK1 wt

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MEK1 wt Recombinant Fusion Protein Amino Acid Sequence				
1	GAM <mark>T</mark> KKKPTP IQLNPAPDGS AVNGTSSAET NLEALQKKLE ELELDEQQRK RLEAFLTQKQ	60		
61	KVGELKDDDF EKISELGAGN GGVVFKVSHK PSGLVMARKL IHLEIKPAIR NQIIRELQVL	120		
121	HECNSPYIVG FYGAFYSDGE ISICMEHMDG GSLDQVLKKA GRIPEQILGK VSIAVIKGLT	180		
181	YLREKHKIMH RDVKPSNILV NSRGEIKLCD FGVSGQLIDS MANSFVGTRS YMSPERLQGT	240		
241	HYSVQSDIWS MGLSLVEMAV GRYPIPPPDA KELELMFGCQ VEGDAAETPP RPRTPGRPLS	300		
301	SYGMDSRPPM AIFELLDYIV NEPPPKLPSG VFSLEFQDFV NKCLIKNPAE RADLKQLMVH	360		
361	AFIKRSDAEE VDFAGWLCST IGLNQPSTPT HAAGV	420		
blue: MEK1 boxed: variation from RefSeq				

MEK1 wt ¹ Amino Acid Sequence				
1	MPKKKPTPIQ LNPAPDGSAV NGTSSAETNL EALQKKLEEL ELDEQQRKRL EAFI	TOKOKV 60		
61	GELKDDDFEK ISELGAGNGG VVFKVSHKPS GLVMARKLIH LEIKPAIRNQ IIR	LQVLHE 120		
121	CNSPYIVGFY GAFYSDGEIS ICMEHMDGGS LDQVLKKAGR IPEQILGKVS IAVI	KGLTYL 180		
181	REKHKIMHRD VKPSNILVNS RGEIKLCDFG VSGQLIDSMA NSFVGTRSYM SPER	CLQGTHY 240		
241	SVQSDIWSMG LSLVEMAVGR YPIPPPDAKE LELMFGCQVE GDAAETPPRP RTPO	SRPLSSY 300		
301	GMDSRPPMAI FELLDYIVNE PPPKLPSGVF SLEFQDFVNK CLIKNPAERA DLKQ	CLMVHAF 360		
361	IKRSDAEEVD FAGWLCSTIG LNQPSTPTHA AGV	420		

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

¹NCBI/Protein accession number NP_002746.1

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Version 001