

MEK1 K97M

mitogen-activated protein kinase kinase 1

Recombinant Protein Kinase Substrate

HGNC Symbol: MAP2K1

Synonyms: PRKMK1, MAPKK1, MKK1

Product No.: 0785-0000-1

Lot: 049

Description: Human MEK1, full length, amino acids M₁-V₃₉₃ (as in [NCBI/Protein](#) entry NP_002746.1), mutationally inactivated by mutation K₉₇M, untagged, expressed in insect cells

Theoretical MW_{Fusion Protein}: 43,784 Da

Expression host: Sf9 insect cells

Purification: GST-Affinity and size exclusion chromatography

ATPase activity: In an ADP-Glo™ assay (Promega) with 10 μM ATP or 30 μM ATP, the ATP → ADP conversion within 30 min is approx. 1% at a concentration of 100 μg/ml MEK1 K97M*
*detailed ATPase assay conditions on request

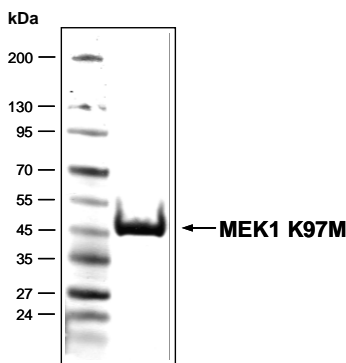
Storage buffer: 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 20 % glycerol

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

Coomassie stain

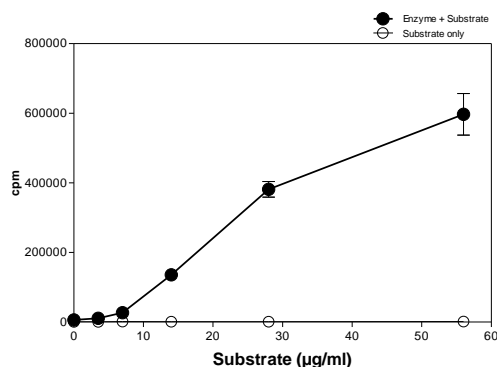


3.0 μg MEK1 K97M, Lot049

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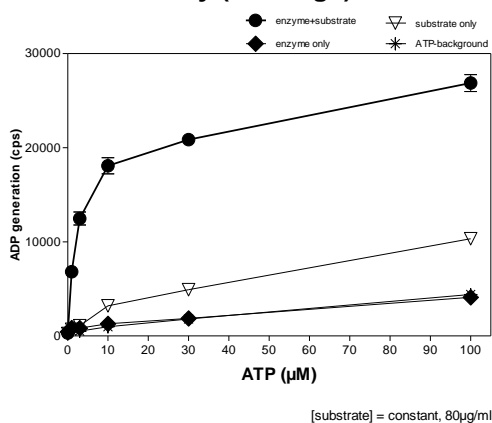
Phosphorylation of MEK1 K97M by RAF1 Y340D/Y341D

Radiometric filter binding assay



Assay conditions:
70 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: 1 μM
Substrate: variable concentration
Kinase: 0.32 μg/ml
MSFC membrane (Millipore)

ADP-Glo™ assay (Promega)



Assay conditions:
70 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 concentration
1 % (v/v) DMSO
Substrate: 80 μg/ml
Kinase: 2 μg/ml



MEK1 K97M

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MEK1 K97M Recombinant Fusion Protein Amino Acid Sequence							
1	GPLAM	TKKKP	TPIQLNPAPD	GSAVNGTSSA	ETNLEALQKK	LEELELDEQQ RKRLEAFLTQ	60
61	KQKVGELKDD	DFEKISELGA	GNGGVVFKVS	HKPSGLVMAR	MLIHLEIKPA	IRNQIIRELQ	120
121	VLHECNSPYI	VGFYGAFYSD	GEISICMEHM	DGGSLDQVLK	KAGRIPEQIL	GKVSIAVIKQ	180
181	LTYLREKHKI	MHRDVKPSNI	LVNSRGEIKL	CDFGVSGQLI	DSMANSFVGT	RSYMSPERLQ	240
241	GTHYSVQSDI	WSMGLSLVEM	AVGRYPIDPP	DAKELELMFG	CQVEGDAEET	PPRPRTPGRP	300
301	LSSYGMSDRP	PMAIFELLDY	IVNEPPPKLP	SGVFSLEFQD	FVKNCLIKNP	AERADLKQLM	360
361	VHAFIKRSDA	EEVDFAGWLC	STIGLNQPST	PTHAAGV			420

1-4: legacy of tag cleavage blue: MEK1 boxed: variation from RefSeq

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