

## ProQinase™ MEK5

mitogen-activated protein kinase kinase 5

Recombinant Human Active Protein Kinase

HGNC Symbol: MAP2K5

Synonyms: MAPKK5, MKK5, PRKMK5

Product No.: 0626-0000-1

Lot: 005

**Description:** Human MEK5, C-terminal fragment, amino acids M<sub>12</sub>-P<sub>448</sub> (as in [NCBI/Protein](#) entry NP\_660143.1), N-terminal HIS<sub>6</sub> fusion protein with a Thrombin cleavage site, expressed in Sf9 insect cells

**Product identity:** MEK5 Lot 005, was confirmed as MEK5 by mass spectroscopy LC-ESI-MS/MS

**Theoretical MW**<sub>Fusion Protein</sub>: 53,671 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:** 0.369 µg/µl  
(Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein)

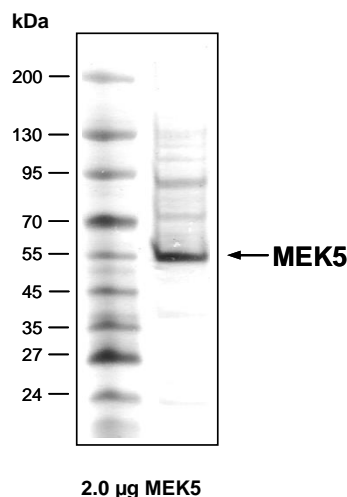
### Biochemical Parameters:

Specific kinase activity (P<sub>i</sub> transfer): 3 pmol/µg × min  
ATP-K<sub>M</sub>: 3.3 µM

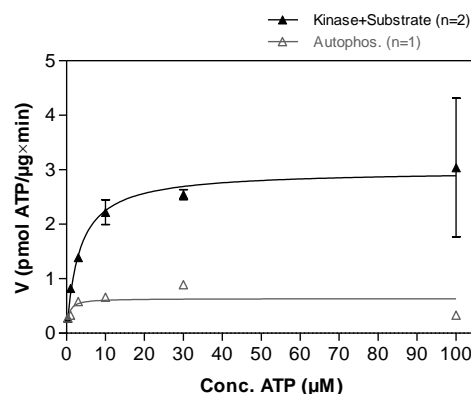
### Additional assay technology:

MEK5 Lot 005 was also successfully tested by Reaction Biology 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

### MEK5 Lot 005: Coomassie stain



### MEK5 Lot 005: Determination of V<sub>max</sub> and K<sub>M</sub> value for ATP



### Determination of K<sub>M</sub> value & Specific activity:

- Assay conditions:
  - 60 mM HEPES-NaOH, pH 7.5
  - 3 mM MgCl<sub>2</sub>
  - 3 mM MnCl<sub>2</sub>
  - 3 µM Na-orthovanadate
  - 1.2 mM DTT
  - 50 µg / ml PEG<sub>20,000</sub>
  - ATP (variable)
  - Substrate: RBER-CHKtide, 100 µg/ml
  - MEK5: 4 µg/ml
- Filter binding assay
- MSFC membrane (Millipore)

## ProQinase™ MEK5

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GST-MEK5 Recombinant Fusion Protein Amino Acid Sequence											
1	MSPIDPMG	HH	HHH	GRRRAS	VAAGI	LVPRG	SPGLDGIYAR	GIQAS	MENQV	LVIRIKIPNS	60
61	GAVDWTVHSG	PQLLFRD	VLD	VIGQVLPEAT	TTAFEYED	ED	GDRITVRSDE	EMKAMLSYYY			120
121	STVMEQQVNG	QLIEPLQIFP	RACKPPGERN	IHGLKVNTRA	GPSQHSSPAV	SDSLPSNSLK					180
181	KSSAELKKIL	ANGQNEQDI	RYRDTLGHGN	GGTVYKAYHV	PSGKILAVKV	ILLDITLELQ					240
241	KQIMSELEIL	YKCDSSYIIG	FYGAFFVENR	ISICTEFMDG	GSLDVYRKMP	EHVLGRIAVA					300
301	VVKGLTYLWS	LKILHRDVKP	SNMLVNTRGQ	VKLCDFGVST	QLVNSIAKTY	VGTNAYMAPE					360
361	RISGEQYGIH	SDVWSLGISF	MELALGRFPY	PQIQKNQGS	MPLQLLQCI	VEDSPVLPVG					420
421	EFSEPFVHFI	TQCMRKQPK	EPAPEELMGH	PFIVQFNDGN	AAVSMWVCR	ALEERSQQG					480
481	PP										540

Red: HIS6-tag Pink: Thrombin cleavage site blue: MEK5 fragment

MEK5 wt <sup>1</sup> Amino Acid Sequence								
1	MLWLALGPPF	AMENQVLVIR	IKIPNSGAVD	WTVHSGPQLL	FRDVL	DVIGQ	VLPEATTTAF	60
61	EYEDGDRI	TVRSDEEMKA	MLSYYYSTVM	EQQVNGQLIE	PLQIFPRACK	PPGERNIHGL		120
121	KVNTRAGPSQ	HSSPAVSDSL	PSNSLKKSSA	ELKKILANGQ	MNEQDIRYR	TLGHNGGTV		180
181	YKAYHVPSGK	ILAVKVILLD	ITLLELQKQIM	SELEILYKCD	SSYIIGFYGA	FFVENRISIC		240
241	TEFMDGGSLD	VYRKMPEHVL	GRIAVAVVKG	LTYLWLSLIL	HRDVKPSNML	VNTRGQVKLC		300
301	DFGVSTQLVN	SIAKTYVGTN	AYMAPERISG	EQYGIHSDVW	SLGISFMELA	LGRFPYPQIQ		360
361	KNQGSMLPLQ	LLQCI	VEDS	PVLPVGEFSE	PFVHFITQCM	RKQPKERPAP	EELMGHPFIV	420
421	QFNDGNAAVV	SMWVCRALEE	RRSQGPP					480

blue: MEK5 sequence expressed in recombinant protein

<sup>1</sup>[NCBI/Protein](#) accession number NP\_660143.1