

Certificate of Analysis

MAP2K5 (MEK5), 100 µg

Recombinant human MAP2K5 expressed in insect cells

ThermoFisher
SCIENTIFIC

Part Number: A32895

Lot Number: 2900554

Immediate Storage: -80°C

Shipping Conditions: dry ice

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Carlsbad, CA 92008

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Description:

Recombinant human full-length MAP2K5 (MEK5) was expressed in insect cells using a N-terminal GST tag.

MAP2K5 (mitogen-activated protein kinase kinase 5) or MEK5 is a dual specificity protein kinase that belongs to the MAP kinase kinase family which specifically interacts with and activates MAPK7/ERK5. MEK5 itself can be phosphorylated and activated by MAP3K3/MEKK3, as well as by atypical protein kinase C isoforms (aPKCs). The signal cascade mediated by MEK5 is involved in growth factor stimulated cell proliferation and muscle cell differentiation. The rs3743354 polymorphism in the MEK5 promoter may affect the risk of developing colorectal cancer (CRC).

Accession Number:

The gene accession number for MAP2K5 (MEK5) is AAH08838.1.

Specific Activity:

43 nmoles of ADP formed per min per mg of total protein using an ADP accumulation assay.

Concentration:

0.1 mg/mL as determined by densitometry of the kinase gel band(s).

Calculated **1,310 nM**.

Aliases:

MEK5, MAPKK5, MKK5, PRKMK5, SAPKK5, SKK5; HsT17454

Storage and Handling:

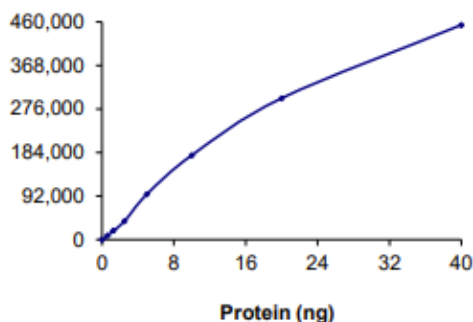
For maximum recovery please spin prior to use. Unless noted below, aliquots of the 5 µg, 10µg and 20µg sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below 20 µL are not recommended. **Please never store a kinase diluted.** If properly stored at -80°C, this product is guaranteed for 6 months from date of purchase.

Storage Buffer:

50 mM Tris-HCl (pH 7.5), 150 mM NaCl, 10 mM Glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF and 25% Glycerol.

QUALITY ASSURANCE

MAP2K5 (MEK5) Activity Graph



Dilution Buffer:

40 mM Tris-HCl (pH 7.4), 20 mM MgCl₂, 50 µM DTT and 0.1 mg/mL BSA.

Assay Conditions:

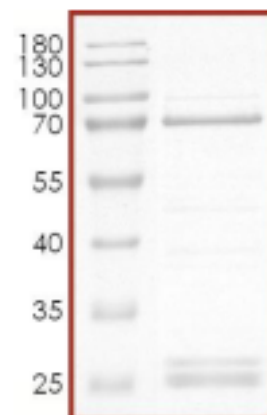
MAP2K5 (MEK5) was pre-diluted in enzyme dilution buffer and assayed in 40 mM Tris-HCl (pH 7.4), 20 mM MgCl₂, 50 µM DTT and 0.1 mg/mL BSA with 25 µM ATP in an ADP accumulation assay using 200 µg/mL inactive MAPK7 and MBP for 40 minutes at room temperature.

Gel Information for MAP2K5 (MEK5)

Page Description: Run on an SDS-PAGE gel and stained with Coomassie®.

Lane 1: Molecular Weight markers as labeled.

Lane 2: MAP2K5 (MEK5)



Purity:

> 85% as determined by a Coomassie® blue stained SDS-PAGE gel, excluding endogenous GST.

Molecular Weight:

76.4 kDa. Calculated from the protein sequence(s).

Protein sequence alignment with reference sequence(s)

GenBank Accession Number: AAH08838

1 MSPILGYWKIKGLVQPTRLLLEYLEEKYEEHLYERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYIADKHNMLGGCPKERAISMLEGAVL GST
1 MSPILGYWKIKGLVQPTRLLLEYLEEKYEEHLYERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYIADKHNMLGGCPKERAISMLEGAVL Life MAP2K5
1 M-----AAH08838

101 DIRYGVSRIAYS^KDFETLKVD^FLSKLP^EMLKMFEDRLCHKTYLNGDHVTHPDFM^LYDALDVVLYMDP^MCLDAFPKLVCFKKRIEAI^PQIDKYLKSSKYIA
101 DIRYGVSRIAYS^KDFETLKVD^FLSKLP^EMLKMFEDRLCHKTYLNGDHVTHPDFM^LYDALDVVLYMDP^MCLDAFPKLVCFKKRIEAI^PQIDKYLKSSKYIA
2 -----

201 WPLQGWQATFGGGDHPKSD
201 WPLQGWQATFGGGDHPKSDLVPRGSMWLALGPPFAMENQVLVIRIKIPNSGAVDWTVHSGPQLLFRDVL^DVIGQVLPEATTTAFEYED^EDGDRITVRS
2 -----LWLALGPPFAMENQVLVIRIKIPNSGAVDWTVHSGPQLLFRDVL^DVIGQVLPEATTTAFEYED^EDGDRITVRS

220
301 DEEMKAMLSYYYSTVMEQQVNGQLIEPLQIFPRACKPPGERNIHGLKVNTRAGPSQHSSPAVSDSLPSNSLKSSAELKKILANGQMNEQDIRYDTLGH
75 DEEMKAMLSYYYSTVMEQQVNGQLIEPLQIFPRACKPPGERNIHGLKVNTRAGPSQHSSPAVSDSLPSNSLKSSAELKKILANGQMNEQDIRYDTLGH

220
401 GNGGTYYKAYHVP^SGKILAVK^VILLDIT^LELQKQIMSE^LILYKCDSSYIIGFYGAFFVENRISICTEFMDGGS^LDVYRKMP^EHVLGRI^AAVAVKGLTYL
175 GNGGTYYKAYHVP^SGKILAVK^VILLDIT^LELQKQIMSE^LILYKCDSSYIIGFYGAFFVENRISICTEFMDGGS^LDVYRKMP^EHVLGRI^AAVAVKGLTYL

220
501 WSLKILHRDVKPSNMLVNTRGQVKLCDFGVSTQLVNSIAKTYVGTNAYMAPERISGEQYGIHSDVWSLGISFMELALGRFPYPQIQKNQGS^LMPLQLLQC
275 WSLKILHRDVKPSNMLVNTRGQVKLCDFGVSTQLVNSIAKTYVGTNAYMAPERISGEQYGIHSDVWSLGISFMELALGRFPYPQIQKNQGS^LMPLQLLQC

220
601 IVDEDSPVL^PVGEFSEPFVHFITQCMRKQPKERPAPEELMGHPFIVQFNDGNA^AAVVSMWVCRALEERRSQGGPP
375 IVDEDSPVL^PVGEFSEPFVHFITQCMRKQPKERPAPEELMGHPFIVQFNDGNA^AAVVSMWVCRALEERRSQGGPP

* highlighted residues denote differences from the reference protein sequence(s).



Chevojn Joseph, Director, Quality

Date: 21/Feb/2024

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