

Certificate of Analysis

MAP4K1 (HPK1), 10 µg

Mitogen-Activated Protein Kinase Kinase Kinase Kinase 1, GST-tagged



Part Number: PV6355
Lot Number: 1753790
Immediate Storage: -80°C
Shipping Conditions: dry ice

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Description:

Recombinant human active MAP4K1 (HPK1) (1-346) was expressed in insect cells using an N-terminal GST tag.

MAP4K1 (HPK1) is a hematopoietic cell-restricted member of the Ste20 serine/threonine kinase super family. MAP4K1 (HPK1) is also known as mitogen-activated protein kinase kinase kinase kinase 1 (MAP4K1). MAP4K1 (HPK1) is a tissue-specific upstream activator of the MEKK/JNK/SAPK signaling pathway. MAP4K1 (HPK1) diminishes T cell receptor (TCR) signaling activity and T cell proliferation by phosphorylating the adaptor protein SLP-76.

Accession Number:

The gene accession number for MAP4K1 (HPK1) is NP_009112.1.

Specific Activity:

144 nmoles of phosphate transferred to myelin basic protein (MBP) per minute per mg of total protein at 30°C.

Concentration:

0.1 mg/mL total protein as measured using the Bradford protein assay with BSA as a standard.

Calculated **1,540 nM**.

Aliases:

HPK1

Storage and Handling:

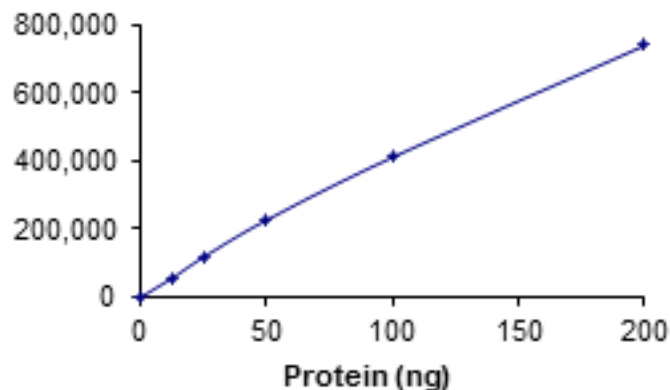
For maximum recovery please spin prior to use. Aliquots of the 5 µg, 10 µg and 20 µg sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below 20 µL are not recommended. **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

MAP4K1 (HPK1) Activity Graph



Dilution Buffer:

5 mM MOPS (pH 7.2), 2.5 mM β-glycerol-phosphate, 5 mM MgCl₂, 1 mM EGTA, 0.4 mM EDTA and 50 ng/µL BSA.

Assay Conditions:

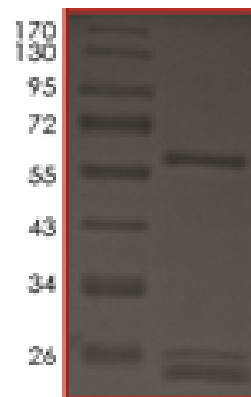
MAP4K1 (HPK1) was pre-diluted in enzyme dilution buffer and assayed in 5 mM MOPS (pH 7.2), 2.5 mM β-glycerol-phosphate, 5 mM MgCl₂, 0.4 mM EDTA, 1 mM EGTA, 0.05 mM DTT, with 50 µM ATP, trace [³²P]-γ-ATP and 200 µg/mL myelin basic protein (MBP) for 15 minutes at 30°C.

Gel Information for MAP4K1 (HPK1)

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

Lane 1: Molecular Weight markers as labeled.

Lane 2: MAP4K1 (HPK1)



Purity:

> 90% as determined by a Coomassie® blue stained SDS-PAGE gel.

Molecular Weight:

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

Protein sequence alignment with reference sequence(s)

GenBank Accession Number: NP_009112.1

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1 MSPILGYWKI KGLVQPTRLL LEYLEEKYEE HLYERDEGDK WRNKKFELGL EFPNLPYYID GDVKLTQ SMA IIRYIADKHN MLGGCPKERA EISMLEGAVL GST TAG
1 MSPILGYWKI KGLVQPTRLL LEYLEEKYEE HLYERDEGDK WRNKKFELGL EFPNLPYYID GDVKLTQ SMA IIRYIADKHN MLGGCPKERA EISMLEGAVL LIFE MAP4K1 (HPK1)
1 ----- NP_009112.1
101 DIRYGVSRIA YSKDFETLKV DFSLKLP EML KMFEDRLCHK TYLNGDHVTH PDFMLYDALD VVLYMDPMCL DAFPKLVCFK KRIEAIQID KYLKSSKYIA
101 DIRYGVSRIA YSKDFETLKV DFSLKLP EML KMFEDRLCHK TYLNGDHVTH PDFMLYDALD VVLYMDPMCL DAFPKLVCFK KRIEAIQID KYLKSSKYIA
1 -----
201 WPLQGWQATF GGGDHPPKSD LVPRGS
201 WPLQGWQATF GGGDHPPKSD LVPRGSM DVV DPDI FNRDPR DHDYLLQRLG GGT YGEV FKA RDKVSGDLVA LKMVKMEPDD DVSTLQKEIL ILKTCRHANI
1 -----MDVV DPDI FNRDPR DHDYLLQRLG GGT YGEV FKA RDKVSGDLVA LKMVKMEPDD DVSTLQKEIL ILKTCRHANI
226
301 VAYHGSYLWL QKLWICMEFC GAGSLQDIYQ VTGSLSELQI SYVCREVLQ LAYLHSQKKI HRDIKGANIL INDAGEVRLA DFGISAQIGA TLARRLSFIG
75 VAYHGSYLWL QKLWICMEFC GAGSLQDIYQ VTGSLSELQI SYVCREVLQ LAYLHSQKKI HRDIKGANIL INDAGEVRLA DFGISAQIGA TLARRLSFIG
226
401 TPYWMAPEVA AVALKGGYNE LCDIWSLGIT AIELAELQPP LFDVHPLRVL FLMTKSGYQP PRLKEKGKWS AAFHNFIVT LTKSPKRRPS ATKMLSHQLV
175 TPYWMAPEVA AVALKGGYNE LCDIWSLGIT AIELAELQPP LFDVHPLRVL FLMTKSGYQP PRLKEKGKWS AAFHNFIVT LTKSPKRRPS ATKMLSHQLV
226
501 SQPGLNRGLI LDLLDKLKNP GKGPSIGDIE DEEPELPPAI PRRIRSTHRS SSLGIPDADC CRRHMEFRKL RG
275 SQPGLNRGLI LDLLDKLKNP GKGPSIGDIE DEEPELPPAI PRRIRSTHRS SSLGIPDADC CRRHMEFRKL RG

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

Nichole Reaksecker, QA Manager

Date: 11/Jun/2015

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