

Certificate of Analysis

MKNK1 (MNK1), 100 µg

MAP Kinase Interacting Serine/Threonine Kinase 1, GST-tagged



Part Number: PR9138A
Lot Number: 1235500B
Immediate Storage: -80°C
Shipping Conditions: dry ice

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Description:

Recombinant human full-length protein, GST-tagged, expressed in insect cells. Activated *in-vitro* by Histidine-tagged MAPK12 (PV3654).

Manufacturing:

Manufactured under ISO 9001 certification at Life Technologies in Madison, WI, USA.

Specific Activity:

57 nmoles of phosphate transferred to RS domain derived peptide substrate (GRSRSRSRSR) per minute per mg of total protein at 30°C. Activity determined at a final protein concentration of 3.33 µg/mL.

Concentration:

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

Calculated **6,610 nM**.

Aliases:

MNK1

Storage and Handling:

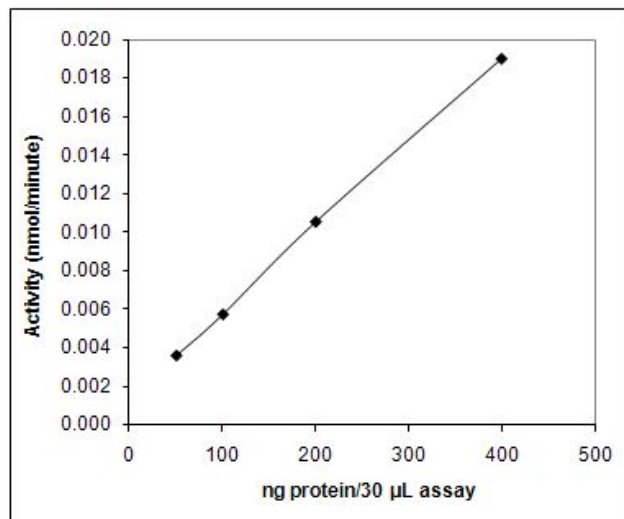
For maximum recovery please spin prior to use. Aliquots of the 5 µg, 10 µg and 20 µg sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below 20 µL are not recommended. **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 (pH 7.5), 150 mM NaCl, 0.5 mM EDTA, 0.02% Triton® X-100, 2 mM DTT and 50% Glycerol.

QUALITY ASSURANCE

MKNK1 (MNK1) Activity Graph



Dilution Buffer:

20 mM Tris (pH 7.5), 0.02% Triton® X-100, 0.1 mg/mL BSA, 5 mM β-glycerophosphate, 2 mM DTT, 1 mM Na₃VO₄ and 10% Glycerol.

Assay Conditions:

MKNK1 (MNK1) was pre-diluted in enzyme dilution buffer and assayed in 20 mM Tris (pH 7.5), 10 mM MgCl₂, 1 mM EGTA, 1 mM Na₃VO₄, 5 mM β-glycerophosphate, 2 mM DTT, 0.02% Triton® X-100, 200 µM ATP, 200 µM RS domain derived peptide substrate (GRSRSRSRSR) and trace [³²P]-γ-ATP for 10 minutes at 30°C.

Gel Information for MKNK1 (MNK1)

Page Description: The SDS-PAGE and/or Native PAGE were run on 4-20% Tris-Glycine Novex® gels (Catalog #: EC6025BOX).

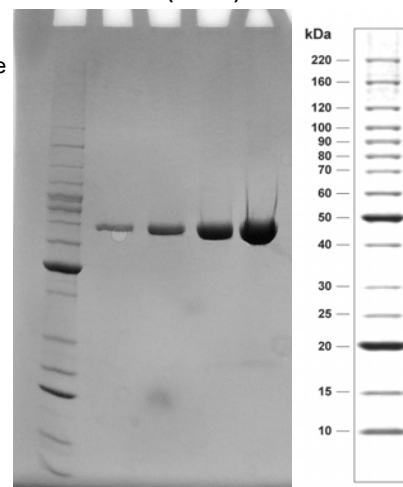
Lane 1: Invitrogen™ BenchMark™ Protein Ladder (Catalog #: 10747-012).

Lane 2: 1 µg MKNK1 (MNK1)

Lane 3: 2 µg MKNK1 (MNK1)

Lane 4: 5 µg MKNK1 (MNK1)

Lane 5: 10 µg MKNK1 (MNK1)



Purity:

95% as determined by a Coomassie® blue stained SDS-PAGE gel.

Molecular Weight:

66.6 kDa calculated from the protein sequence(s). Calculated from the protein sequence(s).

Mass Spectrometry:

MKNK1 (MNK1) was subjected to proteolytic digest followed by mass spec analysis. The resulting MS/MS data verified MKNK1 (MNK1) identity by comparison against the amino acid sequence(s) of the recombinant protein.

Certificate of Analysis

Part Number: PR9138A, Lot Number: 1235500B

Protein sequence alignment with reference sequence(s)

GenBank Accession Number: NP_945324

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1 MAPILGYWKI KGLVQPTRLL LEYLEEKYEE HLYRDEGDK WRNKKFELGL EFPNLPYYID GDVKLTQSMa IIRYIADKHN MLGGCPKERA EISMLEGAVL GST TAG
1 MAPILGYWKI KGLVQPTRLL LEYLEEKYEE HLYRDEGDK WRNKKFELGL EFPNLPYYID GDVKLTQSMa IIRYIADKHN MLGGCPKERA EISMLEGAVL IVGN MNK1
1 ----- NP_945324

101 DIRYGVSRIA YSKDFETLKV DFLSKLPEML KMFEDRLCHK TYLNGDHVTH PDFMLYDALD VVLYMDPMCL DAFPKLVCFK KRIEAIQID KYLKSSSKYIA
101 DIRYGVSRIA YSKDFETLKV DFLSKLPEML KMFEDRLCHK TYLNGDHVTH PDFMLYDALD VVLYMDPMCL DAFPKLVCFK KRIEAIQID KYLKSSSKYIA
1 -----

201 WPLQGWQATF GGGDHPPKSD LVPRHNQTSL YKKAGT
201 WPLQGWQATF GGGDHPPKSD LVPRHNQTSL YKKAGTMVSS QKLEKPIEMG SSEPLPIADG DRRRKKKRRG RATDSLPGKF EDMYKLTSEL LGEGAYAKVQ
1 -----MVSS QKLEKPIEMG SSEPLPIADG DRRRKKKRRG RATDSLPGKF EDMYKLTSEL LGEGAYAKVQ

236
301 GAVSLONGKE YAVKIIEKQA GHSRSRVFRE VETLYQCQGN KNILELIEFF EDDTRFYLVF EKLGQGSILA HIQKQKHFE REASRVVRDV AAALDFLHTK
65 GAVSLONGKE YAVKIIEKQA GHSRSRVFRE VETLYQCQGN KNILELIEFF EDDTRFYLVF EKLGQGSILA HIQKQKHFE REASRVVRDV AAALDFLHTK

236
401 GIAHRDLKPE NILCESPEKV SPVKICDFDL GSGMKLNNSC TPITTPELTT PCGSAEYMAP EVVEVFTDQA TFYDKRCDLW SLGVVLYIML SGYPFVGHG
165 GIAHRDLKPE NILCESPEKV SPVKICDFDL GSGMKLNNSC TPITTPELTT PCGSAEYMAP EVVEVFTDQA TFYDKRCDLW SLGVVLYIML SGYPFVGHG

236
501 GADCGWDRGE VCRVCQNKLF ESIQEGKYEY PDKDWAHISS EAKDLISKLL VRDAKQRLSA AQVLQHPWVQ GEQHQNGPDA LRS.
265 GADCGWDRGE VCRVCQNKLF ESIQEGKYEY PDKDWAHISS EAKDLISKLL VRDAKQRLSA AQVLQHPWVQ GEQHQNGPDA LRS

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



Tony Goossens, Engineer I, QA/QC

Date: 12/Oct/2012

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For questions, please contact our Technical Support Team

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