

Certificate of Analysis

MAP3K19 (YSK4), 10 µg

Recombinant human MAP3K19 expressed in insect cells



Part Number: A30501

Lot Number: 1937304

Immediate Storage: -80°C

Shipping Conditions: dry ice

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Description:

Recombinant human MAP3K19 (YSK4) (941-end) was expressed in insect cells using a N-terminal GST tag.

MAP3K19 (YSK4) belongs to STE Ser/Thr protein kinase family and STE20 subfamily. The MAP3K19 (YSK4) gene is conserved in chimpanzee, Rhesus monkey, dog, cow, mouse, and rat. The important paralog is the MAP3K1 gene. The MAP3K19 (YSK4) ligand-binding domains form an octameric gating ring in the large-conductance Ca^{2+} -activated K^{+} channels. The MAP3K19 (YSK4) kinase function has not been clearly determined yet.

Accession Number:

The gene accession number for MAP3K19 (YSK4) is NP_079328.3.

Specific Activity:

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

Concentration:

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

Calculated **716 nM**.

Aliases:

YSK4; RCK

Storage and Handling:

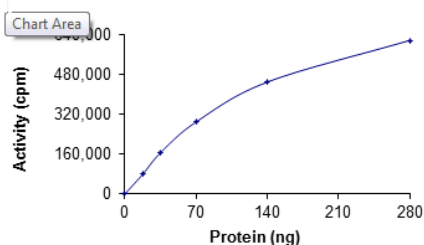
For maximum recovery please spin prior to use. Unless noted below, aliquots of the 5 µg, 10 µg and 20 µg sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below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

MAP3K19 (YSK4) Activity Graph



Dilution Buffer:

5 mM MOPS (pH 7.2), 2.5 mM β -glycerol-phosphate, 4 mM MgCl_2 , 2.5 mM MnCl_2 , 1 mM EGTA and 0.4 mM EDTA, 0.05 mM DTT and 50 ng/µL BSA.

Assay Conditions:

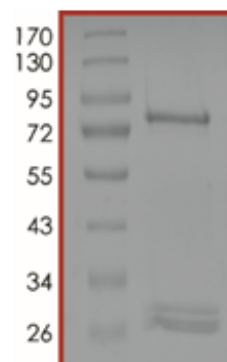
MAP3K19 (YSK4) was pre-diluted in enzyme dilution buffer and assayed in 5 mM MOPS (pH 7.2), 2.5 mM β -glycerol-phosphate, 5 mM MgCl_2 , 1 mM EGTA, 0.4 mM EDTA, 0.05 mM DTT, with 50 µM ATP, trace [^{32}P]- γ -ATP and 200 µg/mL myelin basic protein (MBP) for 15 minutes at 30°C.

Gel Information for MAP3K19 (YSK4)

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

Lane 1: Molecular Weight markers as labeled.

Lane 2: MAP3K19 (YSK4)



Purity:

> 80% as determined by a Coomassie® blue stained SDS-PAGE gel.

Molecular Weight:

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

Protein sequence alignment with reference sequence(s)

GenBank Accession Number: NP_079328.3

1 MSPILGYWKIKGLVQPTRLLLEYLEEKYEHLVERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYIADKHNMLGGCPKERAISMLEGAVL GST
1 MSPILGYWKIKGLVQPTRLLLEYLEEKYEHLVERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYIADKHNMLGGCPKERAISMLEGAVL Life MAP3K19
1 M-----NP_079328.3

101 DIRYGVSRIAYS~~K~~FETLKVD~~F~~LSKLPEMLKMFEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVC~~F~~KKRIEAIPIQIDKYLKSSKYIA
101 DIRYGVSRIAYS~~K~~FETLKVD~~F~~LSKLPEMLKMFEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVC~~F~~KKRIEAIPIQIDKYLKSSKYIA
2 -----

201 WPLQGWQATFGGGDHPKSD
201 WPLQGWQATFGGGDHPKSDLVPRGSMFGKTLSGTNSISQEI~~M~~DSVNNEELTDELLGCLAAELLALDEKDNNSCQKMANETDPENLNVLVRWGSTPKEM
2 -----FGKTLSGTNSISQEI~~M~~DSVNNEELTDELLGCLAAELLALDEKDNNSCQKMANETDPENLNVLVRWGSTPKEM

220
301 GRETTKVKIQRHSSGLRIYDREEKFLISNEKKIFSENSLKSEEPILWTGKEILGKGAYGTVYCGLTSGQLIAVKQVALDTSNKLAAEKEYRKLQEEVDL
75 GRETTKVKIQRHSSGLRIYDREEKFLISNEKKIFSENSLKSEEPILWTGKEILGKGAYGTVYCGLTSGQLIAVKQVALDTSNKLAAEKEYRKLQEEVDL

220
401 LKALKHVNIVAYLGTCLQENTVSIFMEFVPGGSISSIINRFGLPEMVFCYTKQILQGVAYLHENCVVHRDIKGNV~~M~~LMPTGI~~I~~KLIDFGCARRLAWA
175 LKALKHVNIVAYLGTCLQENTVSIFMEFVPGGSISSIINRFGLPEMVFCYTKQILQGVAYLHENCVVHRDIKGNV~~M~~LMPTGI~~I~~KLIDFGCARRLAWA

220
501 GLNGTHS~~D~~MLKSMHGT~~P~~YWM~~A~~PEVINESGYGRKSDIWSIGCTVFEMATGKPP~~L~~ASMDRMAAMFYIGAHRGLMPPLPDHFSENAADFVRMCLTRDQHERPS
275 GLNGTHS~~D~~MLKSMHGT~~P~~YWM~~A~~PEVINESGYGRKSDIWSIGCTVFEMATGKPP~~L~~ASMDRMAAMFYIGAHRGLMPPLPDHFSENAADFVRMCLTRDQHERPS

220
601 ALQLLKHSFLERSH
375 ALQLLKHSFLERSH

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

Anita Targosz

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Date: 20/Oct/2017

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