

Certificate of Analysis

CAMKK2, 1 mg

Calcium/Calmodulin-Dependent Protein Kinase Kinase 2, GST-tagged



Part Number: PV4322
Lot Number: 1629730A
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 via autophosphorylation.

Specific Activity:

45 nmoles of phosphate transferred to myelin basic protein (MBP) per minute per mg of total protein at 30°C. Activity determined at a final protein concentration of 8.33 µg/mL.

Concentration:

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

Calculated **3,670 nM**.

Aliases:

CaMKK beta, CAMKK, MGC15254

Storage and Handling:

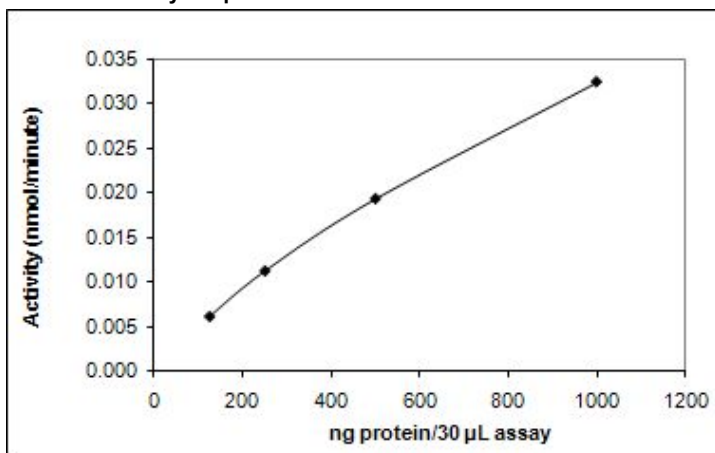
For maximum recovery please spin prior to use. Aliquots of the 5 µg, 10 µg and 20 µg sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below 20 µL are not recommended.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

CAMKK2 Activity Graph



Dilution Buffer:

20 mM Tris (pH 7.5), 0.02% Triton® X-100, 0.1 mg/mL BSA, 2 mM DTT, 0.5 mM Na₃VO₄ and 10% Glycerol.

Assay Conditions:

CAMKK2 was pre-diluted in enzyme dilution buffer and assayed in 10 mM HEPES (pH 7.5), 10 mM MgCl₂, 1 mM Na₃VO₄, 10 µg/mL calmodulin, 1 mM CaCl₂, 2.5 mM DTT, 0.01% Triton® X-100, 200 µM ATP, 500 µg/mL myelin basic protein (MBP) and trace [³²P]-γ-ATP for 10 minutes at 30°C.

Gel Information for CAMKK2

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

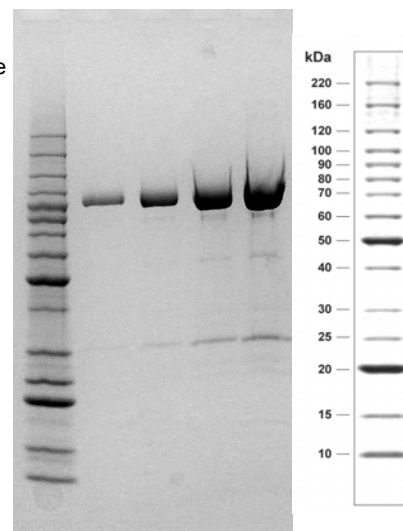
Lane 1: Invitrogen™ BenchMark™ Protein Ladder (Catalog #: 10747-012).

Lane 2: 1.0 µg CAMKK2

Lane 3: 2.0 µg CAMKK2

Lane 4: 5.0 µg CAMKK2

Lane 5: 10 µg CAMKK2



Purity:

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

Molecular Weight:

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

Mass Spectrometry:

CAMKK2 was subjected to proteolytic digest followed by mass spec analysis. The resulting MS/MS data verified CAMKK2 identity by comparison against the amino acid sequence(s) of the recombinant protein.

Protein sequence alignment with reference sequence(s)

GenBank Accession Number: NP_757380.1

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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 CAMKK2
1 ----- NP_757380.1
101 DIRYGVSRIA YSKDFETLKV DFLSKLPEML KMFEDRLCHK TYLNGDHVTH PDFMLYDALD VVLYMDPMCL DAFPKLVCFK KRIEAIQID KYLKSSKYIA
101 DIRYGVSRIA YSKDFETLKV DFLSKLPEML KMFEDRLCHK TYLNGDHVTH PDFMLYDALD VVLYMDPMCL DAFPKLVCFK KRIEAIQID KYLKSSKYIA
1 -----
201 WPLQGWQATF GGGDHPPKSD LVPR
201 WPLQGWQATF GGGDHPPKSD LVPRHNQTSL YKKAGTMSSC VSSQPSSNRA APQDELGGRG SSSSESQKPC EALRGLSSLS IHLGMESFIV VTECEPGCAV
1 -----
224
301 DLGLARDRPL EADGQEVPLD TSGSQARPHL SGRKLSLQER SQGGLAAGGS LDMNGRCICP SLPYSPVSSP QSSPRLPRRP TVESHHSIT GMQDCVQLNQ
65 DLGLARDRPL EADGQEVPLD TSGSQARPHL SGRKLSLQER SQGGLAAGGS LDMNGRCICP SLPYSPVSSP QSSPRLPRRP TVESHHSIT GMQDCVQLNQ
224
401 YTLKDEIGKG SYGVVKLAYN ENDNTYYAMK VLSKKKLIRQ AGFRRRPPPR GTRPAPGGCI QPRGPIEQVY QEIAILKKLD HPNVVKLVEV LDDPNEDHLY
165 YTLKDEIGKG SYGVVKLAYN ENDNTYYAMK VLSKKKLIRQ AGFRRRPPPR GTRPAPGGCI QPRGPIEQVY QEIAILKKLD HPNVVKLVEV LDDPNEDHLY
224
501 MVFELVNGQP VMEVPTLKPL SEDQARFYFQ DLIKGIEYLH YQKIIHRDIK PSNLLVGEDG HIKIADFGVS NEFKGSDALL SNTVGTAPAFM APESLSETRK
265 MVFELVNGQP VMEVPTLKPL SEDQARFYFQ DLIKGIEYLH YQKIIHRDIK PSNLLVGEDG HIKIADFGVS NEFKGSDALL SNTVGTAPAFM APESLSETRK
224
601 IFSGKALDVW AMGVTLYCFV FGQCPFMDER IMCLHSKIKS QALEFPDQPD IAEDLKDLIT RMLDKNPESR IVVPEIKLHP WVTRHGAEPL PSEDENCTLV
365 IFSGKALDVW AMGVTLYCFV FGQCPFMDER IMCLHSKIKS QALEFPDQPD IAEDLKDLIT RMLDKNPESR IVVPEIKLHP WVTRHGAEPL PSEDENCTLV
224
701 EVTEEEVENS VKHIPSLATV ILVKTMIKRK SFGNPFEGSR REERSLSAPG NLLTKQGS ED NLQGTDP PPV GEEEVLL
465 EVTEEEVENS VKHIPSLATV ILVKTMIKRK SFGNPFEGSR REERSLSAPG NLLTKQGS ED NLQGTDP PPV GEEEVLL
    
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* highlighted residues denote differences from the reference protein sequence(s).



Nicole Carlson, QA Engineer

Date: 04/Aug/2014

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