Certificate of Analysis
CSNK1G2 (CK1 gamma 2), 10 µg

Casein Kinase 1 gamma 2, Histidine-tagged

Part Number: PV3499
Lot Number: 2711134B
Immediate Storage: -80°C
Shipping Conditions: dry ice

5781 Van Allen Way
Carlsbad, CA 92008
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Description:

Recombinant human full length protein, Histidine-tagged, expressed in insect cells. No special measures were taken to activate this kinase.

Specific Activity:

230 nmoles of phosphate transferred to dephosphorylated casein substrate per minute per mg of total protein at 30°C. Activity determined at a final protein concentration of 2 µg/mL.

Concentration:

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

Calculated **4,570 nM**.

Aliases:

CK1g2

Storage and Handling:

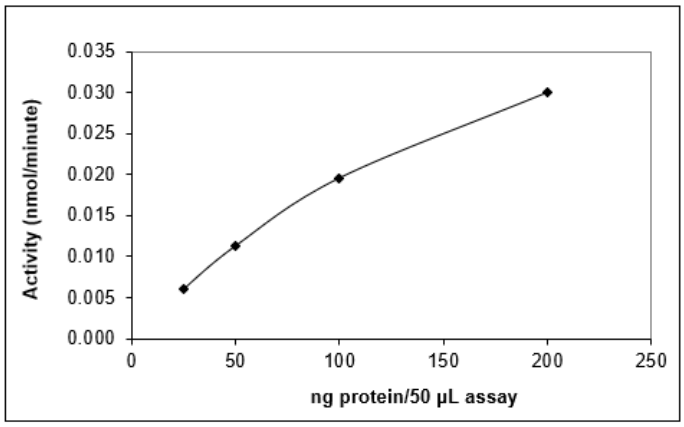
For maximum recovery please spin prior to use. Unless noted below, aliquots of the 5 ug, 10ug and 20ug sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below 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, 0.04% Triton® X–100, 4 mM DTT and 50% Glycerol.

QUALITY ASSURANCE

CSNK1G2 (CK1 gamma 2) Activity Graph



Dilution Buffer:

20 mM Tris (pH 7.5), 0.05% Triton® X−100, 0.1 mg/mL BSA, 2 mM DTT, 0.5 mM Na_3VO_4 and 10% Glycerol.

Assay Conditions:

CSNK1G2 (CK1 gamma 2) was pre-diluted in enzyme dilution buffer and assayed in 12.5 mM Tris (pH 7.5), 10 mM $MgCl_2$, 1 mM EGTA, 0.5 mM Na_3VO_4, 5 mM β−glycerophosphate, 2 mM DTT, 0.01% Triton® X-100, 200 µM ATP, 420 µg/mL dephosphorylated casein substrate and trace [^{32}P]-γ-ATP for 10 minutes at 30°C.

Gel Information for CSNK1G2 (CK1 gamma 2)

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

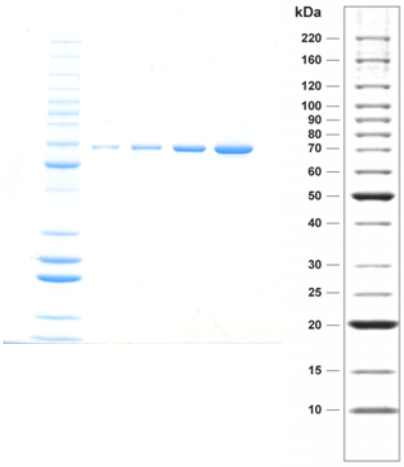
Lane 1: Invitrogen™ BenchMark™ Protein Ladder (Catalog #: 10747-012).

Lane 2: 0.3 µg CSNK1G2 (CK1 gamma 2)

Lane 3: 0.6 µg CSNK1G2 (CK1 gamma 2)

Lane 4: 1.5 µg CSNK1G2 (CK1 gamma 2)

Lane 5: 3.0 µg CSNK1G2 (CK1 gamma 2)



Purity:

95% as determined by a SDS-PAGE gel stained with SimplyBlue™ SafeStain.

Molecular Weight:

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

Mass Spectrometry:

CSNK1G2 (CK1 gamma 2) was subjected to proteolytic digest followed by mass spec analysis. The resulting MS/MS data verified CSNK1G2 (CK1 gamma 2) identity by comparison against the amino acid sequence(s) of the recombinant protein.

Protein sequence alignment with reference sequence(s)

GenBank Accession Number: NP_001310

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  1 MDFDKKGGKG ETEEGRRMSK AGGGRSSHGI RSSGTSSGVL MVGPNFRVGK KIGCGNFGEL RLGKNLYTNE YVAIKLEPIK SRAPQLHLEY RFYKQLSATE IVGN CSNK1G2
  1 MDFDKKGGKG ETEEGRRMSK AGGGRSSHGI RSSGTSSGVL MVGPNFRVGK KIGCGNFGEL RLGKNLYTNE YVAIKLEPIK SRAPQLHLEY RFYKQLSATE NP_001310

101 GVPQVYYFGP CGNYNAMVLE LLGPSLEDLF DLCDRTFTLK TVLMIAIQLI TRMEYVHTKS LIYRDVKPEN FLVGRPGTKR QHAIHIIDFG LAKEYIDPET
101 GVPQVYYFGP CGNYNAMVLE LLGPSLEDLF DLCDRTFTLK TVLMIAIQLI TRMEYVHTKS LIYRDVKPEN FLVGRPGTKR QHAIHIIDFG LAKEYIDPET

201 KKHIPYREHK SLTGTARYMS INTHLGKEQS RRDDLEALGH MFMYFLRGSL PWQGLKADTL KERYQKIGDT KRATPIEVLC ENFPEEMATY LRYVRRLDFF
201 KKHIPYREHK SLTGTARYMS INTHLGKEQS RRDDLEALGH MFMYFLRGSL PWQGLKADTL KERYQKIGDT KRATPIEVLC ENFPEEMATY LRYVRRLDFF

301 EKPDYDYLRK LFTDLFDRSG FVFDYEYDWA GKPLPTPIGT VHTDLPSQPQ LRDKTQPHSK NQALNSTNGE LNADDPTAGH SNAPITAPAE VEVADETKCC
301 EKPDYDYLRK LFTDLFDRSG FVFDYEYDWA GKPLPTPIGT VHTDLPSQPQ LRDKTQPHSK NQALNSTNGE LNADDPTAGH SNAPITAPAE VEVADETKCC

401 CFFKRRKRKS LQRHKLLVPR GSNPAFLYKV VRMNEDLGKP IPNPLLGLDS TRTGHHHHHH.
401 CFFKRRKRKS LQRHK
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* highlighted residues denote differences from the reference protein sequence(s).

Chevohn Joseph, Director, Quality Date: 10/May/2023