

Certificate of Analysis

CSNK1E R178C (CK1 epsilon), 10 µg

Recombinant Human CSNK1E R178C (CK1 epsilon), GST-tagged

ThermoFisher
SCIENTIFIC

Part Number: A33498

Lot Number: 2672105

Immediate Storage: -80°C

Shipping Conditions: dry ice

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Description:

Recombinant human full-length CSNK1E R178C (CK1 epsilon) was expressed in insect cells using a N-terminal GST tag.

CSNK1E R178C (CK1 epsilon) is a member of the CK1 family of serine/threonine protein kinases which play an important role in diverse cell processes, including DNA replication and repair. CSNK1E is a regulator of Yes-associated protein (YAP) transcription coactivator which is a key regulator of organ size and a candidate human oncogene. CSNK1E is activated by CCK2R and this then phosphorylates PKD2 at Ser244. Phosphorylation of PKD2 leads to its nuclear accumulation and efficient phosphorylation of nuclear PKD2 substrates in human gastric cancer cells. CSNK1E can phosphorylate topoisomerase (topo) IIalpha at serine-1106 and this regulates the enzyme activity and sensitivity to topo II-targeted drugs.

Accession Number:

The gene accession number for CSNK1E R178C (CK1 epsilon) is NP_001885.1.

Specific Activity:

36 nmoles of ADP formed per min per mg of total protein using an ADP accumulation assay.

Concentration:

0.1 mg/mL as determined by densitometry of the kinase gel band(s).

Calculated **1,360 nM**.

Aliases:

HCKIE, CK1 epsilon

Storage and Handling:

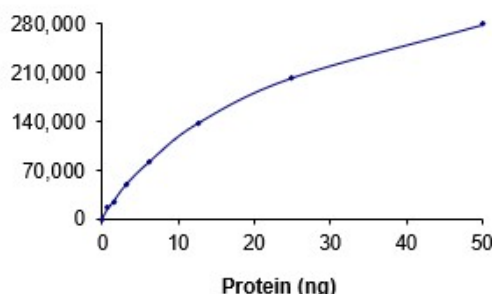
For maximum recovery please spin prior to use. Unless noted below, aliquots of the 5 µg, 10 µg and 20 µg sizes of kinase are not recommended as materials can be used in original packaging until exhausted. For larger sizes, the number of freeze/thaws may be reduced by preparing aliquots, aliquots below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

CSNK1E R178C (CK1 epsilon) Activity Graph



Dilution Buffer:

40 mM Tris-HCl (pH 7.4), 20 mM MgCl₂, 50 µM DTT and 0.1 mg/mL BSA.

Assay Conditions:

CSNK1E R178C (CK1 epsilon) was pre-diluted in enzyme dilution buffer and assayed in 40 mM Tris-HCl (pH 7.4), 20 mM MgCl₂, 50 µM DTT and 0.1 mg/mL BSA with 25 µM ATP in an ADP accumulation assay using 200 µg/mL dephosphorylated casein substrate for 40 minutes at room temperature.

Gel Information for CSNK1E R178C (CK1 epsilon)

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

Lane 1: Molecular Weight markers as labeled.

Lane 2: CSNK1E R178C (CK1 epsilon)



Purity:

> 70% as determined by a Coomassie® blue stained SDS-PAGE gel, excluding endogenous GST.

Molecular Weight:

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

Protein sequence alignment with reference sequence(s)

GenBank Accession Number: NP_001885.1

1 MSPILGYWKIKGLVQPTRLLLEYLEEKYEHLVERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYIADKHNMLGGCPKERAISMLEGAVL GST
1 MSPILGYWKIKGLVQPTRLLLEYLEEKYEHLVERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYIADKHNMLGGCPKERAISMLEGAVL Life CSNK1E R178C
1 M-----NP_001885.1

101 DIRYGVSRIAYSKDFTLKVDFLSKLPEMLKMFEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVCFKKRIEAIPIQIDKYLKSSKYIA
101 DIRYGVSRIAYSKDFTLKVDFLSKLPEMLKMFEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVCFKKRIEAIPIQIDKYLKSSKYIA
2 -----

201 WPLQGWQATFGGGDHPKSD
201 WPLQGWQATFGGGDHPKSDLVPRGSMELRVGNKYRLGRKIGSGSGFDIYLGANIASGEEVAIKLECVKTKHPQLHIESKFYKMMQGGVGIPSIKWCGAE
2 -----ELRVGNKYRLGRKIGSGSGFDIYLGANIASGEEVAIKLECVKTKHPQLHIESKFYKMMQGGVGIPSIKWCGAE

220
301 GDYNVMVMELLGPSLEDLFNFCSRKFSKTVLLADQMISRIEYIHSKNFIHRDVKPDNFMGLGKKGNLVYIIDFGLAKKYRDARTHQHIPPYRENKNLT
75 GDYNVMVMELLGPSLEDLFNFCSRKFSKTVLLADQMISRIEYIHSKNFIHRDVKPDNFMGLGKKGNLVYIIDFGLAKKYRDARTHQHIPPYRENKNLT

220
401 GTAGYASINTHLGIEQSRDDLESGLYVLMYFNLGSLPWQGLKAATKRQKYERISEKKMSTPIEVLCKGYPSEFSTYLNFCRSLRFDDKPDYSYLRQLFR
175 GTARYASINTHLGIEQSRDDLESGLYVLMYFNLGSLPWQGLKAATKRQKYERISEKKMSTPIEVLCKGYPSEFSTYLNFCRSLRFDDKPDYSYLRQLFR

220
501 NLFHRQGFSDYVFDWNMLKFGAARNPEDVDRERHEREERMQLRGSATRALPPGPPTGATANRLRSAAEPVASTPASRIQPAGNTSPRAISRVDRE
275 NLFHRQGFSDYVFDWNMLKFGAARNPEDVDRERHEREERMQLRGSATRALPPGPPTGATANRLRSAAEPVASTPASRIQPAGNTSPRAISRVDRE

220
601 KVSMLHRGAPANVSSDLTGRQEVSRIPASQTSVPFDHLGK
375 KVSMLHRGAPANVSSDLTGRQEVSRIPASQTSVPFDHLGK

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

Rachel Smith

Rachel Smith, Manager, QA/QC

Date: 23/Mar/2023

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