

Human CSNK2A1 / CK2A1 Protein (GST Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 10630-H09B

General Information

Gene Name Synonym:

CK2A1; CKII; CSNK2A3

Protein Construction:

A DNA sequence encoding the human CSNK2A1 isoform 1 (NP_808227.1) (Met 1-Gln 391) was fused with the GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 93 % as determined by SDS-PAGE

Bio Activity:

The specific activity was determined to be 9 nmol/min/mg using casein as substrate.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human CSNK2A1/GST chimera consists of 616 amino acids and predicts a molecular mass of 71.4 kDa. It migrates as an approximately 65 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Supplied as sterile 50mM Tris, 100mM NaCl, 0.5mM PMSF, 0.5mM GSH, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

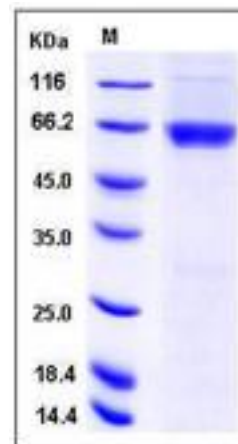
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Casein kinase II subunit alpha, also known as CK II alpha, CSNK2A1 and CK2A1, is a member of the protein kinase superfamily, Ser / Thr protein kinase family and CK2 subfamily. Casein kinase II (CSNK2A1) is a serine / threonine protein kinase that phosphorylates acidic proteins such as casein. This kinase is composed of an alpha, an alpha-prime, and two beta subunits. The alpha subunits contain the catalytic activity while the beta subunits undergo autophosphorylation. Casein kinase II (CSNK2A1) is a constitutively active, ubiquitously expressed serine / threonine protein kinase that is thought to have a regulatory function in cell proliferation, cell differentiation and apoptosis. CSNK2A1 functions as a tetrameric complex consisting of two regulatory beta-subunits and two catalytic units (alpha and alpha') in a homomeric or heteromeric conformation. Whilst the alpha- and alpha'-subunits are catalytically identical, proteins that regulate CSNK2A1, such as cdc2 and Hsp90, preferentially bind to the alpha and not the alpha'-subunit. CSNK2A1 can phosphorylate a number of key intracellular signaling proteins implicated in tumor suppression (p53 and PTEN) and tumorigenesis (myc, jun, NF-kappaB). CSNK2A1 is also thought to influence Wnt signaling via beta-catenin phosphorylation and the PI 3-K signaling pathway via th phosphorylation of Akt.

References

1. Schlpfer J, *et al.* (1997) A radiation hybrid framework map of bovine chromosome 13. *Chromosome Res.* 5(8): 511-9.
2. Wirkner U, *et al.* (1994) The human gene (CSNK2A1) coding for the casein kinase II subunit alpha is located on chromosome 20 and contains tandemly arranged Alu repeats. *Genomics.* 19(2): 257-65.
3. Wirkner U, *et al.* (1998) Genomic organization and promoter identification of the human protein kinase CK2 catalytic subunit alpha (CSNK2A1). *Genomics.* 48(1): 71-8.

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For US Customer: Fax: 267-657-0217

• Tel: 215-583-7898

Global Customer: Fax :+86-10-5862-8288

• Tel:+86-400-890-9989

• <http://www.sinobiological.com>