Mouse CSNK2A1 / CK2A1 Protein (His & GST Tag)

Catalog Number: **50818-M20B**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

Csnk2a1-rs4

Protein Construction:

A DNA sequence encoding the mouse CSNK2A1 (Q60737) (Met1-Gln391) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus.

Source: Mouse

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

Bio Activity:

The specific activity was determined to be 34 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 ℃

Predicted N terminal: Met

Molecular Mass:

The secreted recombinant mouse CSNK2A1/GST chimera consists of 628 amino acids and has a calculated molecular mass of 72.9 kDa. The recombinant protein migrates as an approximately 65 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Supplied as sterile 20mM Tris, 500mM NaCl, pH 8.0, 10% gly

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:

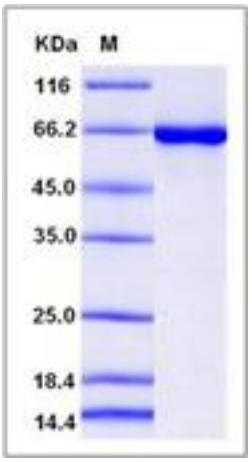
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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.