

# Mouse CSNK2A1 / CK2A1 Protein

Catalog Number: 50818-MNCB



Sino Biological  
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## General Information

### Gene Name Synonym:

Csnk2a1-rs4

### Protein Construction:

A DNA sequence encoding the mouse CAMK4 CSNK2A1 (Q60737) (Met1-Gln391) was expressed and purified with two additional amino acids (Gly & Pro) at the N-terminus.

**Source:** Mouse

**Expression Host:** Baculovirus-Insect Cells

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE

### Bio Activity:

**Kinase activity untested**

### 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:** Gly

### Molecular Mass:

The recombinant mouse CSNK2A1 consists of 393 amino acids and predicts a molecular mass of 45.3 KDa. It migrates as an approximately 40 KDa band in SDS-PAGE under reducing conditions.

### Formulation:

Supplied as sterile 20mM Tris, 500mM NaCl, 10% glycerol, pH 7.4.

## Usage Guide

### Storage:

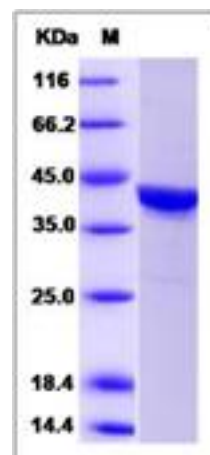
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**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 the phosphorylation of Akt.

## References

1. Schlupfer 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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