Human CSNK1G2 Protein (His Tag)

Catalog Number: **12373-H07B**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CK1g2

Protein Construction:

A DNA sequence encoding the mature form of human CSNK1G2 (P78368-1) (Met 18-Lys 415) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 80 % as determined by SDS-PAGE

Bio Activity:

The specific activity was determined to be 13 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: His

Molecular Mass:

The recombinant human CSNK1G2 consists of 417 amino acids and predicts a molecular mass of 47.8 kDa. It migrates as an approximately 48 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Supplied as sterile 20mM Tris, 500mM NaCl, 10% gly, 1mM DTT, 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:

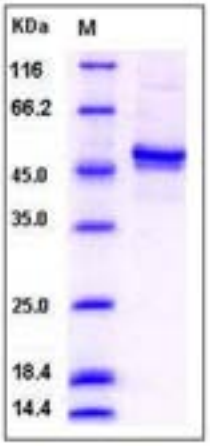
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Casein kinase I gamma 2 isoform (CSNK1G2), a member of the large casein kinase I (CKI) subfamily, protein kinase superfamily. It may affect the development of brain, and associate with vesicular trafficking and neurotransmitter releasing from small synaptic vesicles. The CKI family includes several other isoforms (alpha, beta, gamma, and delta). Dishevelled (Dsh), another positive component of the Wnt pathway, becomes phosphorylated in response to Wnt signals. All the CKI isoforms, with the exception of gamma, increase the phosphorylation of Dsh in vivo. Casein kinase 1 gamma (CK1gamma, or CSNK1G) is associated with the cell membrane and binds to LRP. CK1gamma was found to be needed for Wnt signaling through Wnt receptor LRP. CSNK1G2 inhibits Smad3-mediated TGF-beta responses including induction of target genes and cell growth arrest, and this inhibition is dependent on CSNK1G2 kinase activity. The overexpression of CSNK1G2 in human cancers, may act as an oncoprotein during tumorigenesis. In addition, as an MTA1s-binding protein, CSNK1G2 could further potentiate the estrogen receptor (ER) corepressive function of MTA1s.

References

1.McKay RM, *et al.* (2001) The casein kinase I family in Wnt signaling. Dev Biol. 235(2): 388-96. 2.Mishra SK, *et al.* (2004) Metastatic tumor antigen 1 short form (MTA1s) associates with casein kinase I-gamma2, an estrogen-responsive kinase. Oncogene. 23(25): 4422-9. 3.Yinan M, *et al.* (2004) Polymorphisms of casein kinase I gamma 2 gene associated with simple febrile seizures in Chinese Han population. Neurosci Lett. 368(1): 2-6.