

# Human CASK Kinase Protein (His & GST Tag)



Sino Biological  
Biological Solution Specialist

Catalog Number: 11913-H20B

## General Information

### Gene Name Synonym:

CAGH39; CAMGUK; CMG; FGS4; LIN2; MICPCH; MRXSNA; TNRC8

### Protein Construction:

A DNA sequence encoding the human CASK isoform 4 (O14936-4) (Ala 2-Tyr 898) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus.

**Source:** Human

**Expression Host:** Baculovirus-Insect Cells

## QC Testing

**Purity:** > 82 % as determined by SDS-PAGE

### Bio Activity:

**No Kinase Activity**

### 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 CASK/GST chimera consists of 1134 amino acids and has a calculated molecular mass of 130 kDa. It migrates as an approximately 120 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 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:

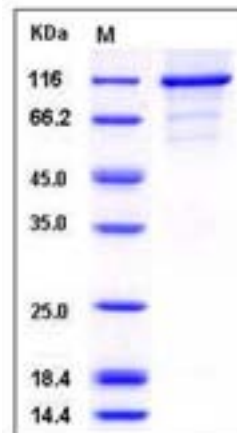
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Peripheral plasma membrane protein CASK, also known as calcium/calmodulin-dependent serine protein kinase, CASK and LIN2, is a nucleus, cytoplasm and cell membrane protein which belongs to theMAGUK family. CASK / LIN2 contains oneguanylate kinase-like domain, twoL27 domains, onePDZ (DHR) domain, oneprotein kinase domain and oneSH3 domain. CASK / LIN2 is ubiquitously expressed. Expression of CASK / LIN2 is significantly greater in brain relative to kidney, lung, and liver and in fetal brain and kidney relative to lung and liver. CASK / LIN2 is a multidomain scaffolding protein with a role in synaptic transmembrane protein anchoring and ion channel trafficking. CASK / LIN2 contributes to neural development and regulation of gene expression via interaction with the transcription factor TRB1. It binds to cell-surface proteins, including amyloid precursor protein, neurexins and syndecans. CASK / LIN2 may mediate a link between the extracellular matrix and the actin cytoskeleton via its interaction with syndecan and with the actin/spectrin-binding protein 4.1. Defects in CASK are the cause of mental retardation X-linked CASK-related (MRXCASK). Mental retardation is characterized by significantly below average general intellectual functioning associated with impairments in adaptative behavior and manifested during the developmental period. Defects in CASK are also the cause of FG syndrome type 4 which is an X-linked disorder characterized by mental retardation, relative macrocephaly, hypotonia and constipation.

## References

1.Cohen A.R., et al., 1998, J. Cell Biol. 142:129-138. 2.Bhalla K., et al., 2008, Am. J. Hum. Genet. 83:703-713. 3.Mukherjee K., et al., 2008, Cell 133: 328-339.

Manufactured By Sino Biological Inc., FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

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>