Human CASK Kinase Protein

Catalog Number: 11913-HNCB

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

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

Protein Construction:

A DNA sequence encoding the human CASK (O14936-4) (Ala 2-Tyr 898) was expressed and purified with two additional amino acids (Gly & Pro) at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % 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 ℃

Predicted N terminal: Gly

Molecular Mass:

The secreted recombinant human CASK consists of 899 amino acids and predicts a molecular mass of 102.1 KDa. The apparent molecular mass of the protein is approximately 102 KDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

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

Usage Guide

Storage:

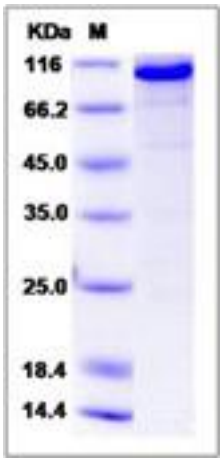
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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.