abcam

Product datasheet

Recombinant human CASK protein ab131707

5 Images

Description

Product name	Recombinant human CASK protein
Biological activity	The specific activity of ab131707 was determined to be 3 nmol/min/mg.
Purity	> 95 % SDS-PAGE. Assessed by densitometry. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Accession	O14936
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Predicted molecular weight	95 kDa including tags
Amino acids	1 to 564
Tags	GST tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab131707** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies SDS-PAGE Western blot
Form	Liquid
Additional notes	**ab204874** (PKI-alpha peptide) can be utilized as a substrate for assessing kinase activity

Preparation and Storage

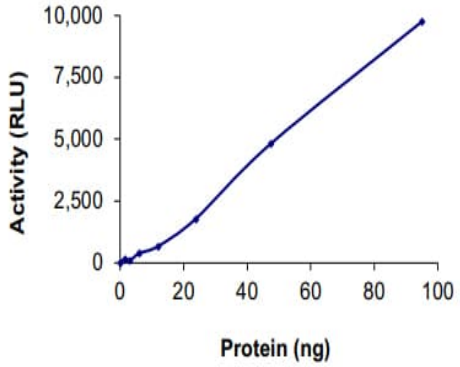
Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80ºC. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.31% Glutathione, 0.002% PMSF, 0.005% DTT, 0.79% Tris HCl, 0.003% EDTA, 25% Glycerol (glycerin, glycerine), 0.88% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

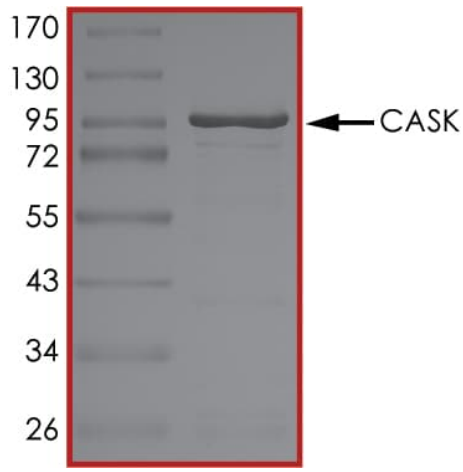
Function	Multidomain scaffolding protein with a role in synaptic transmembrane protein anchoring and ion channel trafficking. Contributes to neural development and regulation of gene expression via interaction with the transcription factor TRB1. Binds to cell-surface proteins, including amyloid precursor protein, neurexins and syndecans. 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.
Tissue specificity	Ubiquitous. Expression is significantly greater in brain relative to kidney, lung, and liver and in fetal brain and kidney relative to lung and liver.
Involvement in disease	Defects in CASK are the cause of mental retardation X-linked CASK-related (MRXCASK) [MIM:300749]. Mental retardation is characterized by significantly below average general intellectual functioning associated with impairments in adaptative behavior and manifested during the developmental period. Patients with mental retardation X-linked CASK-related can manifest a severe phenotype consisting of severe intellectual deficit, congenital or postnatal microcephaly, disproportionate brainstem and cerebellar hypoplasia (MICPCH Syndrome). A milder phenotype consists of mental retardation alone or associated with nystagmus. Defects in CASK are the cause of FG syndrome type 4 (FGS4) [MIM:300422]. FG syndrome (FGS) is an X-linked disorder characterized by mental retardation, relative macrocephaly, hypotonia and constipation.
Sequence similarities	In the N-terminal section; belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily. Belongs to the MAGUK family. Contains 1 guanylate kinase-like domain. Contains 2 L27 domains. Contains 1 PDZ (DHR) domain. Contains 1 protein kinase domain. Contains 1 SH3 domain.
Domain	The first L27 domain binds DLG1 and the second L27 domain probably binds LIN7. The protein kinase domain mediates the interaction with FCHSD2.
Cellular localization	Nucleus. Cytoplasm. Cell membrane.

Images



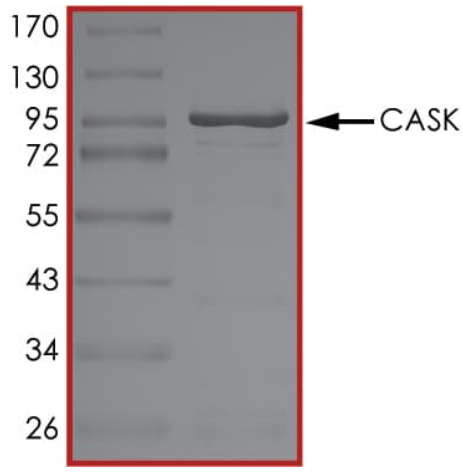
Functional Studies - Recombinant human CASK protein (ab131707)

The specific activity of CASK (ab131707) was determined to be 0.24 nmol/min/mg as per activity assay protocol and was equivalent to 3.5 nmol/min/mg as per radiometric assay



SDS-PAGE - Recombinant human CASK protein (ab131707)

SDS PAGE analysis of ab131707



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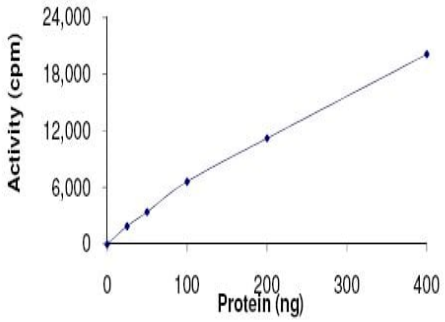
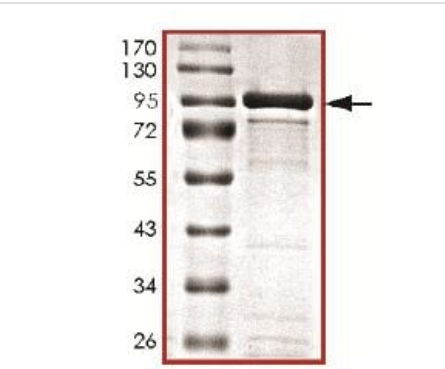


Functional Studies - Recombinant human CASK protein (ab131707)

The specific activity of ab131707 was determined to be 3 nmol/min/mg.



SDS-PAGE - Recombinant human CASK protein (ab131707)

The purity of ab131707 was determined to be >95% by densitometry.

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