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Datasheet for ABIN7564825

**CAMK1 Protein (AA 1-374) (His tag)**

## Overview

Quantity:	1 mg
Target:	CAMK1
Protein Characteristics:	AA 1-374
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CAMK1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Purpose:	Custom-made recombinat Camk1 Protein expressed in mammalian cells.
Sequence:	MPGAVEGPRW KQAEDIRDIY DFRDVLGTGA FSEVILAEDK RTQKLVAIKC IAKKALEGKE GSMENEIAVL HKIKHPNIVA LDDIYESGGH LYLMQLVSG GELFDRIVEK GFYTERDASR LIFQVLDAVK YLHDLGIVHR DLKPENLLYY SLDEDSKIMI SDFGLSKMED PGSVLSTACG TPGYVAPEVL AQKPYSKAVD CWSIGVIAYI LLCGYPPFYD ENDAKLFEQI LKAEYEFDSP YWDDISDSAK DFIRHLMEKD PEKRFTCEQA LQHPWIAGDT ALDKNIHQSV SEQIKKNFAK SKWKQAFNAT AVVRHMRKLQ LGTSQEGQGQ TGSHGELLTP TAGGPAAGCC CRDCCVEPGS ELPPAPPPSS RAMD <b>Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.</b>
Characteristics:	Key Benefits:

## Product Details

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- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

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Purity: > 90 % as determined by Bis-Tris Page, Western Blot

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Grade: custom-made

## Target Details

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Target: CAMK1

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Alternative Name: Camk1 ([CAMK1 Products](#))

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Background: Calcium/calmodulin-dependent protein kinase type 1 (EC 2.7.11.17) (CaM kinase I) (CaM-KI) (CaM kinase I alpha) (CaMKI-alpha),FUNCTION: Calcium/calmodulin-dependent protein kinase that operates in the calcium-triggered CaMKK-CaMK1 signaling cascade and, upon calcium influx, regulates transcription activators activity, cell cycle, hormone production, cell differentiation, actin filament organization and neurite outgrowth. Recognizes the substrate consensus sequence [MVLIF]-x-R-x(2)-[ST]-x(3)-[MVLIF]. Regulates axonal extension and growth cone motility in hippocampal and cerebellar nerve cells. Upon NMDA receptor-mediated Ca(2+) elevation, promotes dendritic growth in hippocampal neurons and is essential in synapses for full long-term potentiation (LTP) and ERK2-dependent translational activation. Downstream of NMDA receptors, promotes the formation of spines and synapses in hippocampal neurons by phosphorylating ARHGEF7/BETAPIX on 'Ser-673', which results in the enhancement of ARHGEF7 activity and activation of RAC1. Promotes neuronal differentiation and neurite outgrowth by activation and phosphorylation of MARK2 on 'Ser-91', 'Ser-92', 'Ser-93' and 'Ser-294'. Promotes nuclear export of HDAC5 and binding to 14-3-3 by phosphorylation of 'Ser-259'

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## Target Details

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and 'Ser-498' in the regulation of muscle cell differentiation. Regulates NUMB-mediated endocytosis by phosphorylation of NUMB on 'Ser-276' and 'Ser-295'. Involved in the regulation of basal and estrogen-stimulated migration of medulloblastoma cells through ARHGEF7/BETAPIX phosphorylation. Is required for proper activation of cyclin-D1/CDK4 complex during G1 progression in diploid fibroblasts. Plays a role in K(+) and ANG2-mediated regulation of the aldosterone synthase (CYP11B2) to produce aldosterone in the adrenal cortex. Phosphorylates EIF4G3/eIF4GII. In vitro phosphorylates CREB1, ATF1, CFTR, MYL9 and SYN1/synapsin I (By similarity). {ECO:0000250, ECO:0000269|PubMed:15150258}.

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Molecular Weight: 41.6 kDa

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UniProt: [Q91YS8](#)

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Pathways: [Myometrial Relaxation and Contraction](#), [Regulation of Muscle Cell Differentiation](#), [Smooth Muscle Cell Migration](#)

## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Restrictions: For Research Use only

## Handling

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Format: Liquid

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Buffer: The buffer composition is at the discretion of the manufacturer.

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Handling Advice: Avoid repeated freeze-thaw cycles.

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Storage: -80 °C

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Storage Comment: Store at -80°C.

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Expiry Date: 12 months