

### CaMKI peptide ab5015

#### 製品の詳細

製品名	CaMKI peptide
精製度	> 70 % HPLC. Peptides are analyzed by Reverse-Phase HPLC (RP-HPLC) in order to determine purity. Identities are confirmed by MALDI-MS.
Animal free	No
由来	Synthetic

#### 特性

Our **Abpromise guarantee** covers the use of **ab5015** in the following tested applications.

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

アプリケーション	Blocking
製品の状態	Lyophilized
備考	

This peptide may be used for neutralization and control experiments with the polyclonal antibody that reacts with this product and human CaMKI protein, catalog **ab3551**. Using a solution of peptide of equal volume and concentration to the corresponding antibody will yield a large molar excess of peptide (~ 70-fold) for competitive inhibition of antibody-protein binding reactions.

#### 前処理および保存

保存方法および安定性	Shipped at 4°C. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
再構成	>95% pure, lyophilized synthetic peptide. Reconstitute with 0.1 ml of distilled water.

#### 関連情報

機能	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
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activation. Downstream of NMDA receptors, promotes the formation of spines and synapses in hippocampal neurons by phosphorylating ARHGEF7/BETAPIX on 'Ser-694', 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' 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 (By similarity). 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.

**組織特異性**

Widely expressed. Expressed in cells of the zona glomerulosa of the adrenal cortex.

**配列類似性**

Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily. Contains 1 protein kinase domain.

**ドメイン**

The autoinhibitory domain overlaps with the calmodulin binding region and interacts in the inactive folded state with the catalytic domain as a pseudosubstrate.

**翻訳後修飾**

Phosphorylated by CaMKK1 and CaMKK2 on Thr-177.

Polyubiquitinated by the E3 ubiquitin-protein ligase complex SCF(FBXL12), leading to proteasomal degradation.

**細胞内局在**

Cytoplasm. Nucleus. Predominantly cytoplasmic.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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