

Datasheet for ABIN7554284

CAMK2B Protein (AA 1-666) (His tag)



[Go to Product page](#)

Overview

Quantity:	1 mg
Target:	CAMK2B
Protein Characteristics:	AA 1-666
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CAMK2B protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant CAMK2B Protein expressed in mammalian cells.
Sequence:	<p>MATTVTCTRF TDEYQLYEDI GKGAFSVVRR CVKLCTGHEY AAKIINTKKL SARDHQLER</p> <p>EARICRLKH SNIVRLHDSI SEEGFHYLVF DLVTGGELFE DIVAREYYSE ADASHCIQI</p> <p>LEAVLHCHQM GVVHRDLKPE NLLASKCKG AAVKLADFGL AIEVQGDQQA WFGFAGTPGY</p> <p>LSPEVLRKEA YGKPVDIWAC GVILYILLVG YPPFWDEDQH KLYQQIKAGA YDFPSPEWDT</p> <p>VTPEAKNLIN QMLTINPAKR ITAHEALKHP WVCQRSTVAS MMHRQETVEC LKKFNARRKL</p> <p>KGAILTTMLA TRNFSVGRQT TAPATMSTAA SGTTMGLVEQ AKSLLNKKAD GVKPQTNSTK</p> <p>NSAAATSPKG TLPPAALEPQ TTVIHNPVDG IKESSDSANT TIEDEDAKAP RVPDILSSVR</p> <p>RGSGAPEAEG PLPCPSPAPF SPLPAPSPRI SDILNSVRRG SGTPEAEGPL SAGPPPCLSP</p> <p>ALLGPLSSPS PRISDILNSV RRGSGTPEAE GPSPVGPSPC PSPTIPGLPL TPSRKQEIHK</p> <p>TTEQLIEAVN NGDFEAYAKI CDPGLTSFEP EALGNLVEGM DFHRFYFENL LAKNSKPIHT</p> <p>TILNPHVHVI GEDAACIAYI RLTQYIDGQG RPRTSQSEET RVWHRRDGKW QNVHFHCSGA</p> <p>PVAPLQ Sequence without tag. The proposed Purification-Tag is based on experiences with</p>

the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.

Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	<p>Key Benefits:</p> <ul style="list-style-type: none">• 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). <p>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.</p> <p>If you are not interested in a full length protein, please contact us for individual protein fragments.</p> <p>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.</p>
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	CAMK2B
Alternative Name:	CAMK2B (CAMK2B Products)
Background:	Calcium/calmodulin-dependent protein kinase type II subunit beta (CaM kinase II subunit beta) (CaMK-II subunit beta) (EC 2.7.11.17),FUNCTION: Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca(2+)/calmodulin-binding and autophosphorylation, and is involved in dendritic spine and synapse formation, neuronal plasticity and regulation of sarcoplasmic reticulum Ca(2+) transport in skeletal muscle (PubMed:16690701). In neurons, plays an essential structural role in the reorganization of the actin cytoskeleton during plasticity by binding and bundling actin filaments in a kinase-independent manner. This structural function is required for correct targeting of CaMK2A, which acts downstream of NMDAR to promote dendritic spine and synapse formation and maintain synaptic plasticity which enables

Target Details

long-term potentiation (LTP) and hippocampus-dependent learning. In developing hippocampal neurons, promotes arborization of the dendritic tree and in mature neurons, promotes dendritic remodeling. Also regulates the migration of developing neurons (PubMed:29100089).

Participates in the modulation of skeletal muscle function in response to exercise (PubMed:16690701). In slow-twitch muscles, is involved in regulation of sarcoplasmic reticulum (SR) Ca(2+) transport and in fast-twitch muscle participates in the control of Ca(2+) release from the SR through phosphorylation of triadin, a ryanodine receptor-coupling factor, and phospholamban (PLN/PLB), an endogenous inhibitor of SERCA2A/ATP2A2. In response to interferon-gamma (IFN-gamma) stimulation, catalyzes phosphorylation of STAT1, stimulating the JAK-STAT signaling pathway (By similarity). Phosphorylates reticulophagy regulator RETREG1 at 'Ser-151' under endoplasmic reticulum stress conditions which enhances RETREG1 oligomerization and its membrane scission and reticulophagy activity (PubMed:31930741). {ECO:0000250|UniProtKB:P08413, ECO:0000269|PubMed:16690701, ECO:0000269|PubMed:29100089, ECO:0000269|PubMed:31930741}.

Molecular Weight: 72.7 kDa

UniProt: [Q13554](#)

Pathways: [WNT Signaling](#), [Interferon-gamma Pathway](#), [Myometrial Relaxation and Contraction](#), [Regulation of G-Protein Coupled Receptor Protein Signaling](#), [Smooth Muscle Cell Migration](#), [Regulation of long-term Neuronal Synaptic Plasticity](#)

Application Details

Application Notes: We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Restrictions: For Research Use only

Handling

Format: Liquid

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

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months