Recombinant Rat CAMK4 Protein (1-474 aa), His-tagged

Cat. No. CAMK4-379R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat CAMK4 Protein (1-474 aa) is produced by E. coli expression system. This protein is fused with a 6xHis tag at the N-terminal. Protein Description: Full Length.
Species	Rat
Source	E.coli
ProteinLength	1-474 aa
Description	Isoform 1: Calcium/calmodulin-dependent protein kinase that operates in the calcium-triggered CaMKK-CaMK4 signaling cascade and regulates, mainly by phosphorylation, the activity of several transcription activators, such as CREB1, MEF2D, JUN and RORA, which play pivotal roles in immune response, inflammation, and mory consolidation. In the thymus, regulates the CD4+/CD8+ double positive thymocytes selection threshold during T-cell ontogeny. In CD4 mory T-cells, is required to link T-cell antigen receptor (TCR) signaling to the production of IL2, IFNG and IL4 (through the regulation of CREB and MEF2). Regulates the differentiation and survival phases of osteoclasts and dendritic cells (DCs). Mediates DCs survival by linking TLR4 and the regulation of tporal expression of BCL2. Phosphorylates the transcription activator CREB1 on 'Ser-133' in hippocampal neuron nuclei and contribute to mory consolidation and long term potentiation (LTP) in the hippocampus. Can activate the MAP kinases MAPK1/ERK2, MAPK8/JNK1 and MAPK14/p38 and stimulate transcription through the phosphorylation of ELK1 and ATF2. Can also

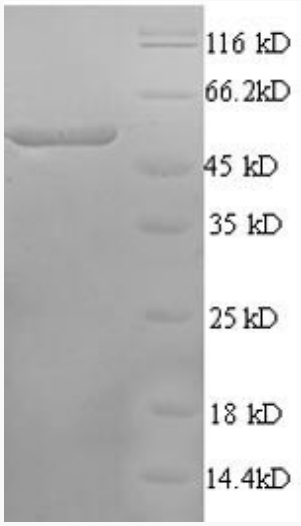
Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	phosphorylate in vitro CREBBP, PRM2, MEF2A and STMN1/OP18 .Isoform 2: Heat-stable, acidic, calmodulin-binding protein.
Form	Tris-based buffer, 50% glycerol
Molecular Mass	57.2 kDa
AA Sequence	MLKVTVPSCPSSPCSSVTSSTENLVPDYWIDGSKRDPLSDFFEVESELGRGATSIVY RCKQKGTQKPYALKVLKKTVDKKIVRTEIGVLLRLSHPNIIKLKEIFETPTEISLVLELVT GGELFDRIVEKGYYSERDAADAVKQILEAVAYLHENGIVHRDLKPENLLYATPAPDAP LKIADFGLSKIVEHQVLMKTVCGTPGYCAPEILRGCAYGPEVDMWSVGIITYILLCGFE PFYDERGDQFMFRRILNCEYYFISPWWDEVSLNAKDLVKKLIVLDPKKRLTTFQALQ HPWVTGKAANFVHMDTAQKKLQEFNARRKLKAAVKAVVASSRLGSASSSHTNIQES NKASSEAQPAQDGKDKTDPLENKMQAGDHEAAKAAADETMKLQSEEVEEEEGVKE EEEEEEEEEETSRMVPQEPEDRLETDDQEMKRNSEETLKSVEEEMDPKAEEEAAA VGLGVPPQQDAILPEY
Purity	> 90% as determined by SDS-PAGE.
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4 centigrade for up to one week.
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20 centigrade/-80 centigrade. The shelf life of lyophilized form is 12 months at -20 centigrade/-80 centigrade.
Concentration	A hardcopy of COA with concentration instruction is sent along with the products.

GENE INFORMATION

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Gene Name	Camk4 calcium/calmodulin-dependent protein kinase IV [Rattus norvegicus]
Official Symbol	CAMK4
Synonyms	CAMK4; caMK IV; calspermin; CAM kinase-GR; Ccdpk; RATCCDPK;
Gene ID	25050
mRNA Refseq	NM_012727
Protein Refseq	NP_036859
UniProt ID	P13234



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

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