

Recombinant Anti-CaMK4 Rabbit mAb

Catalog # AP95152

Product Information

Application	WB, IHC, FC, IP, IF/IC
Primary Accession	Q16566
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal
Calculated MW	51926

Additional Information

Gene ID	814
Other Names	CAMK; CAMK-GR; CAMKIV; Calcium/calmodulin-dependent protein kinase type IV; CaMK IV; CaM kinase-GR
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within human CaMK4 protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~1:10~50 IP~~N/A IF/IC~~N/A
Format	Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	CAMK4
Synonyms	CAMK, CAMK-GR, CAMKIV
Function	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 memory consolidation. In the thymus, regulates the CD4(+)/CD8(+) double positive thymocytes selection threshold during T-cell ontogeny. In CD4 memory 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 temporal expression of BCL2. Phosphorylates the transcription activator CREB1 on 'Ser-133' in hippocampal neuron nuclei and contribute to memory 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 phosphorylate in vitro CREBBP, PRM2, MEF2A and STMN1/OP18.

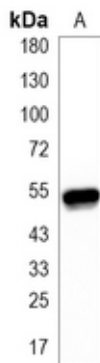
Cellular Location

Cytoplasm. Nucleus. Note=Localized in hippocampal neuron nuclei. In spermatids, associated with chromatin and nuclear matrix (By similarity).

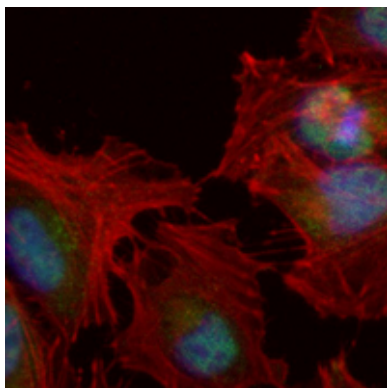
Tissue Location

Expressed in brain, thymus, CD4 T-cells, testis and epithelial ovarian cancer tissue.

Images



Western blot analysis of CaMK4 expression in Jurkat (A) whole cell lysates. (Predicted band size: 52 kD; Observed band size: 52 kD)



Immunofluorescent analysis of CaMK4 staining in Jurkat cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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