

CaMKIV Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52730**Specification**

CaMKIV Antibody - Product Information

Application	WB
Primary Accession	Q16566
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Calculated MW	55 KDa

CaMKIV Antibody - Additional Information**Gene ID** 814**Other Names**

Brain Ca(2+) calmodulin dependent protein kinase type 4; Brain Ca(2+) calmodulin dependent protein kinase type IV; Brain Ca²⁺-calmodulin dependent protein kinase type IV; Calcium / calmodulin dependent protein kinase type 4 catalytic chain; Calcium / calmodulin dependent protein kinase type IV catalytic chain; Calcium/calmodulin dependent protein kinase IV; Calcium/calmodulin dependent protein kinase type IV; Calcium/calmodulin-dependent protein kinase type IV; CAM kinase 4; CAM kinase GR; CAM kinase IV; CAM kinase-GR; CaMK 4; CAMK GR; CaMK IV; CaMK4; CaMKGR; IV; KCC4_HUMAN; MGC36771.

Dilution

WB ~ ~ 1:1000

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.

Storage

Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

CaMKIV Antibody - 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

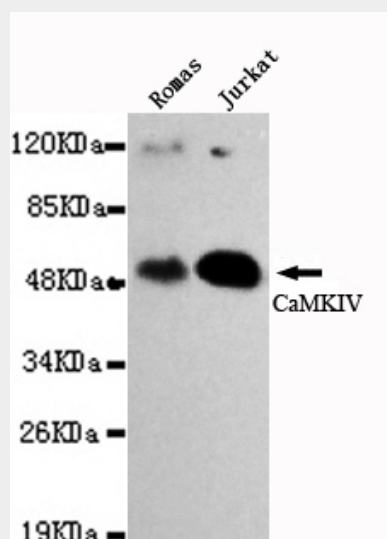
Expressed in brain, thymus, CD4 T-cells, testis and epithelial ovarian cancer tissue.

CaMKIV Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CaMKIV Antibody - Images



Western blot detection of CaMKIV in Romas and Jurkat cell lysates using CaMKIV mouse mAb (1:1000 diluted). Predicted band size: 52KDa. Observed band size: 55KDa.

CaMKIV Antibody - Background

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.

CaMKIV Antibody - References

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Hanissian S.H.,et al.J. Biol. Chem. 268:20055-20063(1993).