

ARG54071 anti-CaMKIV antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes CAMK4
Tested Reactivity	Hu
Tested Application	WB
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Target Name	CaMKIV
Species	Human
Immunogen	Purified recombinant human CaMKIV protein fragments expressed in E.coli.
Conjugation	Un-conjugated
Alternate Names	CaMK IV; CaMK-GR; EC 2.7.11.17; Calcium/calmodulin-dependent protein kinase type IV; caMK; IV; CaM kinase-GR

Application Instructions

Application table	Application	Dilution
	WB	1:1000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	55 kDa	

Properties

Form	Liquid
Purification	Affinity purified
Buffer	0.1M Tris-Glycine (pH 7.4), 150 mM NaCl, 0.2% Sodium azide and 50% Glycerol
Preservative	0.2% Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 814 Human Swiss-port # Q16566 Human
Gene Symbol	CAMK4
Gene Full Name	calcium/calmodulin-dependent protein kinase IV
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.
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. [UniProt]
Research Area	Gene Regulation antibody; Neuroscience antibody; Signaling Transduction antibody
Calculated Mw	52 kDa
PTM	Phosphorylated by CaMKK1 and CaMKK2 on Thr-200. Dephosphorylated by protein phosphatase 2A. Autophosphorylated on Ser-12 and Ser-13. Glycosylation at Ser-189 modulates the phosphorylation of CaMK4 at Thr-200 and negatively regulates its activity toward CREB1 in basal conditions and during early ionomycin stimulation.
Cellular Localization	Cytoplasm. Nucleus

Images

