

Product datasheet

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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 GenelD: 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 consodilation. 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 osteolclasts and dendritic cells (DCs). Mediates DCs survival by linking TLR4 and the regulation of temporal expression of BCL2. Phosphrylates 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

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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.

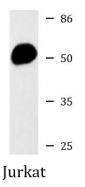
Autophosphorylated on Ser-12 and Ser-13.

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 inomycin stimulation.

Cellular Localization Cytoplasm. Nucleus

Images



ARG54071 anti-CaMKIV antibody WB image

Western blot: Jurkat cell lysate stained with ARG54071 anti-CaMKIV antibody at 1:1000 dilution.