

ARG45461 anti-CAMKIV antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes CAMKIV
Tested Reactivity	Ms, Rat
Tested Application	FACS, ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	CAMKIV
Species	Mouse
Immunogen	Recombinant protein containing to mouse CAMKIV.
Conjugation	Un-conjugated
Alternate Names	CAMK4; 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
	FACS	1 - 3 µg/10 ⁶ cells
	ICC/IF	5 µg/ml
	IHC-P	2-5 µg/ml
	WB	0.1-0.25 µg/ml
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	58 kDa	

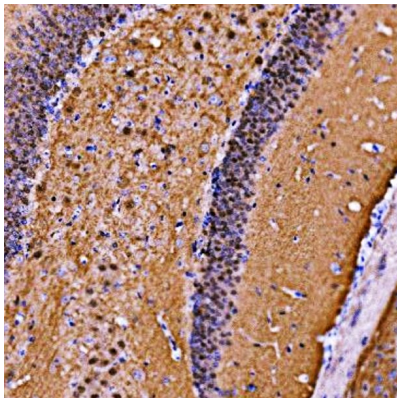
Properties

Form	Powder
Purification	Affinity purified
Buffer	0.2% Na ₂ HPO ₄ , 0.9% NaCl and 4% Trehalose.
Stabilizer	4% Trehalose
Concentration	0.5 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 or below. 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.

Bioinformation

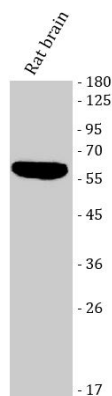
Gene Symbol	CAMK4
Gene Full Name	calcium/calmodulin-dependent protein kinase IV
Background	Calcium/calmodulin-dependent protein kinase that operates in the calcium-triggered CaMKK-CaMK4 signaling cascade and regulates, mainly by phosphorylation, the activity of several transcription activators, such 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]
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. [UniProt]
Cellular Localization	Cytoplasm. Nucleus. [UniProt]

Images



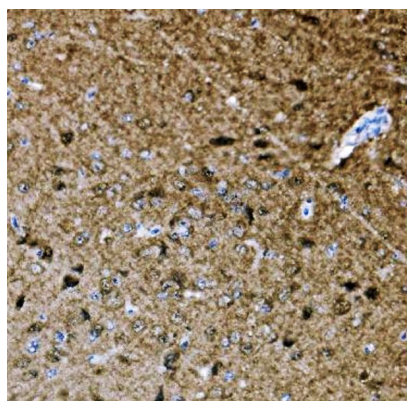
ARG45461 anti-CAMKIV antibody IHC-P image

Immunohistochemistry: Rat brain stained with ARG45461 anti-CAMKIV antibody at 2 µg/ml dilution.



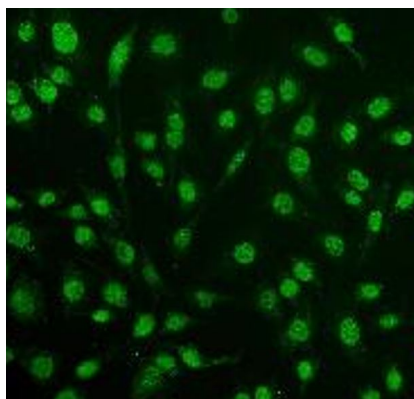
ARG45461 anti-CAMKIV antibody WB image

Western blot: Rat brain stained with ARG45461 anti-CAMKIV antibody at 0.25 $\mu\text{g}/\text{ml}$ dilution.



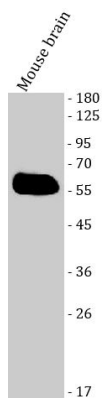
ARG45461 anti-CAMKIV antibody IHC-P image

Immunohistochemistry: Mouse brain stained with ARG45461 anti-CAMKIV antibody at 2 $\mu\text{g}/\text{ml}$ dilution.



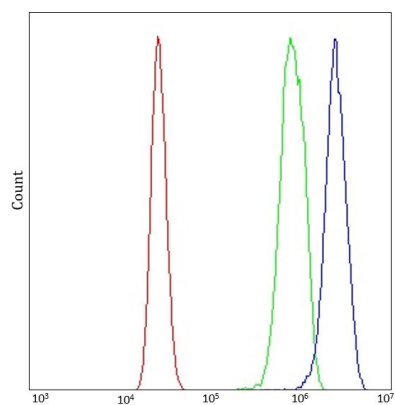
ARG45461 anti-CAMKIV antibody ICC/IF image

Immunofluorescence: RM-1 stained with ARG45461 anti-CAMKIV antibody at 5 $\mu\text{g}/\text{ml}$ dilution.



ARG45461 anti-CAMKIV antibody WB image

Western blot: Mouse brain stained with ARG45461 anti-CAMKIV antibody at 0.25 $\mu\text{g}/\text{ml}$ dilution.



ARG45461 anti-CAMKIV antibody FACS image

Flow Cytometry: RAW264.7 stained with ARG45461 anti-CAMKIV antibody at $1\text{ }\mu\text{g}/10^6$ cells dilution.