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CaMKII Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10279

Specification

CaMKII Antibody - Product Information

Application	**WB**
Primary Accession	Q9UQM7
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**54088**

CaMKII Antibody - Additional Information

Gene ID 815

Application & Usage	**Western blotting at 1-2 µg/ml. However, the optimal concentrations should be determined individually. The anti-CaMKII antibody recognizes the 50 kDa of CamonkeyII in samples from human, mouse, and rat origins.**

Other Names
CAMK2A , CAMKA , KIAA0968, EC 2.7.11.17

Target/Specificity
CaMKII

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) purified rabbit polyclonal anti-CaMKII antibody in phosphate-buffered saline (PBS) containing 50% glycerol, 1% BSA, and 0.02% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions

CaMKII Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CaMKII Antibody - Protein Information

Name CAMK2A

Synonyms CAMKA, KIAA0968

Function
Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca(2+)/calmodulin-binding and autophosphorylation, and is involved in various processes, such as synaptic plasticity, neurotransmitter release and long-term potentiation (PubMed:14722083). Member of the NMDAR signaling complex in excitatory synapses, it regulates NMDAR-dependent potentiation of the AMPAR and therefore excitatory synaptic transmission (By similarity). Regulates dendritic spine development (PubMed:28130356). Also regulates the migration of developing neurons (PubMed:29100089). Phosphorylates the transcription factor FOXO3 to activate its transcriptional activity (PubMed:23805378). Phosphorylates the transcription factor ETS1 in response to calcium signaling, thereby decreasing ETS1 affinity for DNA (By similarity). In response to interferon-gamma (IFN-gamma) stimulation, catalyzes phosphorylation of STAT1, stimulating the JAK- STAT signaling pathway (PubMed:11972023). In response to interferon- beta (IFN-beta) stimulation, stimulates the JAK-STAT signaling pathway (PubMed:35568036). Acts as a negative regulator of 2- arachidonoylglycerol (2-AG)-mediated synaptic signaling via modulation of DAGLA activity (By similarity).

Cellular Location
Synapse {ECO:0000250|UniProtKB:P11275}. Postsynaptic density {ECO:0000250|UniProtKB:P11275}. Cell projection, dendritic spine. Cell projection, dendrite. Note=Postsynaptic lipid rafts {ECO:0000250|UniProtKB:P11275}

CaMKII 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 Cytomety
- Cell Culture

CaMKII Antibody - Images

CaMKII Antibody - Background

CaMKII is a member of calcium/calmodulin-activated kinase, functioning in neural synaptic stimulation and T-cell receptor signaling. CaMKII has catalytic and regulatory domains. The binding of Ca++/calmodulin to its regulatory domain releases its autoinhibitory effect and activates the

kinase. The activated CaMKII further autophosphorylates itself at Thr286 to render the kinase constitutively active.