

# CaMKIIα/δ (phospho Thr286) Polyclonal Antibody

Catalog # AP66974

# **Product Information**

ApplicationWB, IHC-P, IFPrimary AccessionQ9UQM7, Q13557ReactivityHuman, Mouse, Rat

Host Rabbit
Clonality Polyclonal
Calculated MW 54088

## **Additional Information**

Gene ID 815

Other Names CAMK2A; CAMKA; KIAA0968; Calcium/calmodulin-dependent protein kinase

type II subunit alpha; CaM kinase II subunit alpha; CaMK-II subunit alpha; CAMK2D; CAMKD; Calcium/calmodulin-dependent protein kinase type II

subunit delta; CaM kinase II

Dilution WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300.

Immunofluorescence: 1/200 - 1/1000. ELISA: 1/10000. Not yet tested in other

applications. IHC-P~~N/A IF~~1:50~200

Format Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium

azide.

Storage Conditions -20°C

#### **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

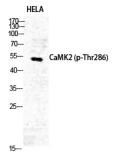
(PubMed:<u>23805378</u>). Phosphorylates the transcription factor ETS1 in response to calcium signaling, thereby decreasing ETS1 affinity for DNA (By similarity). In response to interferon-gamma (IFN-gamma) stimulation, catalyzes

phosphorylation of STAT1, stimulating the JAK- STAT signaling pathway (PubMed:<u>11972023</u>). In response to interferon- beta (IFN-beta) stimulation, stimulates the JAK-STAT signaling pathway (PubMed:<u>35568036</u>). 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}

# **Images**



Western Blot analysis of HELA cells using Phospho-CaMKII $\alpha/\delta$  (T286) Polyclonal Antibody diluted at 1 : 500

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.