

CAMK2A / CaMKII Alpha Antibody (Internal)
Goat Polyclonal Antibody
Catalog # ALS13371**Specification**

CAMK2A / CaMKII Alpha Antibody (Internal) - Product Information

Application	WB, IHC
Primary Accession	O9UQM7
Reactivity	Human, Mouse, Rat, Rabbit, Monkey, Pig, Horse, Bovine, Dog
Host	Goat
Clonality	Polyclonal
Calculated MW	54kDa KDa

CAMK2A / CaMKII Alpha Antibody (Internal) - Additional Information**Gene ID** 815**Other Names**

Calcium/calmodulin-dependent protein kinase type II subunit alpha, CaM kinase II subunit alpha, CaMK-II subunit alpha, 2.7.11.17, CAMK2A, CAMKA, KIAA0968

Target/Specificity

Human CAMK2A. This antibody is expected to recognize both reported isoforms (NP_057065.2; NP_741960.1).

Reconstitution & Storage

Store at -20°C. Minimize freezing and thawing.

Precautions

CAMK2A / CaMKII Alpha Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

CAMK2A / CaMKII Alpha Antibody (Internal) - 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:28130356).

[29100089](http://www.uniprot.org/citations/29100089)).
Phosphorylates the transcription factor FOXO3 to activate its transcriptional activity (PubMed:[23805378](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/11972023)). In response to interferon- beta (IFN-beta) stimulation, stimulates the JAK-STAT signaling pathway (PubMed:[35568036](http://www.uniprot.org/citations/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}

CAMK2A / CaMKII Alpha Antibody (Internal) - Protocols

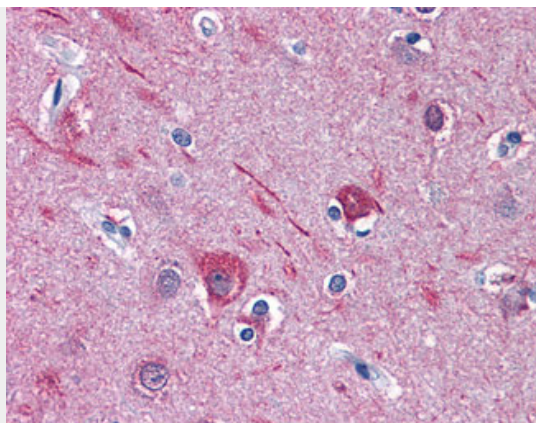
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CAMK2A / CaMKII Alpha Antibody (Internal) - Images



Antibody (0.1 ug/ml) staining of Mouse Brain lysate (35 ug protein in RIPA buffer).



Anti-CAMK2A antibody IHC of human brain, cortex.

CAMK2A / CaMKII Alpha Antibody (Internal) - Background

CaM-kinase II (CAMK2) is a prominent kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release. Member of the NMDAR signaling complex in excitatory synapses it may regulate NMDAR-dependent potentiation of the AMPAR and synaptic plasticity (By similarity).

CAMK2A / CaMKII Alpha Antibody (Internal) - References

Li G.Y.,et al.Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.
Nagase T.,et al.DNA Res. 6:63-70(1999).
Schmutz J.,et al.Nature 431:268-274(2004).
Krapivinsky G.,et al.Neuron 43:563-574(2004).