

**RAT Camk2a Antibody (ascites)**  
**Mouse Monoclonal Antibody (Mab)**  
Catalog # AM2002a

### Specification

---

#### RAT Camk2a Antibody (ascites) - Product Information

Application	WB,E
Primary Accession	<a href="#">P11275</a>
Other Accession	<a href="#">P11798</a> , <a href="#">NP_037052.1</a>
Reactivity	Rat
Predicted	Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgM
Calculated MW	54115

#### RAT Camk2a Antibody (ascites) - Additional Information

**Gene ID** 25400

#### Other Names

Calcium/calmodulin-dependent protein kinase type II subunit alpha, CaM kinase II subunit alpha, CaMK-II subunit alpha, Camk2a

#### Target/Specificity

Purified His-tagged Camk2a protein(Fragment) was used to produced this monoclonal antibody.

#### Dilution

WB~~1:1000~8000

#### Format

Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.

#### Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

RAT Camk2a Antibody (ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

#### RAT Camk2a Antibody (ascites) - Protein Information

**Name** Camk2a

**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. Member of the NMDAR

signaling complex in excitatory synapses, it regulates NMDAR- dependent potentiation of the AMPAR and therefore excitatory synaptic transmission (PubMed:[15312654](#)). Regulates dendritic spine development. Also regulates the migration of developing neurons. Phosphorylates the transcription factor FOXO3 to activate its transcriptional activity (By similarity). 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 (By similarity). Acts as a negative regulator of 2-arachidonoylglycerol (2-AG)-mediated synaptic signaling via modulation of DAGLA activity (By similarity).

#### Cellular Location

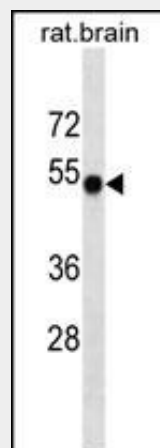
Synapse. Postsynaptic density. Cell projection, dendritic spine  
{ECO:0000250|UniProtKB:Q9UQM7}. Cell projection, dendrite  
{ECO:0000250|UniProtKB:Q9UQM7}. Note=Postsynaptic lipid rafts

#### RAT Camk2a Antibody (ascites) - 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](#)

#### RAT Camk2a Antibody (ascites) - Images



RAT Camk2a Antibody (Cat. #AM2002a) western blot analysis in rat brain tissue lysates (35µg/lane). This demonstrates the Camk2a antibody detected the Camk2a protein (arrow).

#### RAT Camk2a Antibody (ascites) - 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).

**RAT Camk2a Antibody (ascites) - References**

Hund, T.J., et al. J. Clin. Invest. 120(10):3508-3519(2010) Xu, L., et al. Circ. Res. 107(3):398-407(2010) Guetg, N., et al. Proc. Natl. Acad. Sci. U.S.A. 107(31):13924-13929(2010) Blaich, A., et al. Proc. Natl. Acad. Sci. U.S.A. 107(22):10285-10289(2010) Jenkins, M.A., et al. J. Neurosci. 30(15):5125-5135(2010)