

**CAMK2G Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1916a****Specification****CAMK2G Antibody - Product Information**

Application	WB, E
Primary Accession	<a href="#">Q13555</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	62.6kDa KDa

**Description**

The product of this gene is one of the four subunits of an enzyme which belongs to the serine/threonine protein kinase family, and to the Ca(2+)/calmodulin-dependent protein kinase subfamily. Calcium signaling is crucial for several aspects of plasticity at glutamatergic synapses. In mammalian cells the enzyme is composed of four different chains: alpha, beta, gamma, and delta. The product of this gene is a gamma chain. Many alternatively spliced transcripts encoding different isoforms have been described but the full-length nature of all the variants has not been determined.

**Immunogen**

Purified recombinant fragment of human CAMK2G (AA: 322-481) expressed in E. Coli.

**Formulation**

Purified antibody in PBS with 0.05% sodium azide.

**CAMK2G Antibody - Additional Information**

**Gene ID** 818

**Other Names**

Calcium/calmodulin-dependent protein kinase type II subunit gamma, CaM kinase II subunit gamma, CaMK-II subunit gamma, 2.7.11.17, CAMK2G, CAMK, CAMK-II, CAMKG

**Dilution**

WB~~1/500 - 1/2000

E~~1/10000

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

CAMK2G Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**CAMK2G Antibody - Protein Information**

## Name CAMK2G

## Synonyms CAMK, CAMK-II, CAMKG

## Function

Calcium/calmodulin-dependent protein kinase that functions autonomously after  $\text{Ca}(2+)$ /calmodulin-binding and autophosphorylation, and is involved in sarcoplasmic reticulum  $\text{Ca}(2+)$  transport in skeletal muscle and may function in dendritic spine and synapse formation and neuronal plasticity (PubMed: [16690701](http://www.uniprot.org/citations/16690701)). In slow-twitch muscles, is involved in regulation of sarcoplasmic reticulum (SR)  $\text{Ca}(2+)$  transport and in fast-twitch muscle participates in the control of  $\text{Ca}(2+)$  release from the SR through phosphorylation of the ryanodine receptor-coupling factor triadin (PubMed: [16690701](http://www.uniprot.org/citations/16690701)). In the central nervous system, it is involved in the regulation of neurite formation and arborization (PubMed: [30184290](http://www.uniprot.org/citations/30184290)). It may participate in the promotion of dendritic spine and synapse formation and maintenance of synaptic plasticity which enables long-term potentiation (LTP) and hippocampus-dependent learning. In response to interferon-gamma (IFN-gamma) stimulation, catalyzes phosphorylation of STAT1, stimulating the JAK-STAT signaling pathway (By similarity).

## Cellular Location

Sarcoplasmic reticulum membrane; Peripheral membrane protein; Cytoplasmic side

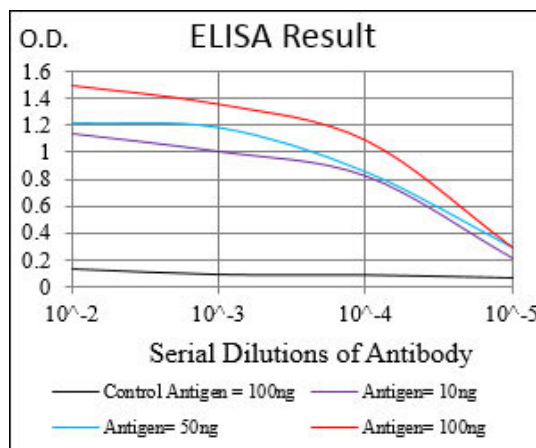
## Tissue Location

Expressed in skeletal muscle.

## CAMK2G 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 Cytometry](#)
- [Cell Culture](#)



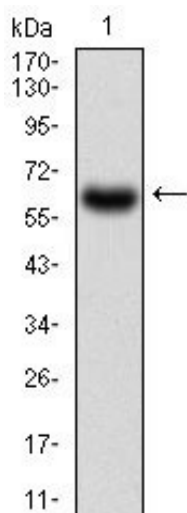


Figure 1: Western blot analysis using CAMK2G mAb against human CAMK2G (AA: 322-481) recombinant protein. (Expected MW is 44 kDa)

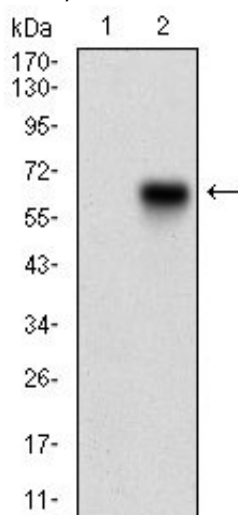


Figure 2: Western blot analysis using CAMK2G mAb against HEK293 (1) and CAMK2G (AA: 322-481)-hlgGFc transfected HEK293 (2) cell lysate.

### CAMK2G Antibody - Background

This gene encodes a member of the intermediate filament protein family and is expressed primarily in nerve cells. ; ;

### CAMK2G Antibody - References

1. Blood. 2012 Dec 6;120(24):4829-39.
2. Diabetologia. 2002 Apr;45(4):580-3.