10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CAMK2G (CAMK2 gamma) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7208a

Specification

CAMK2G (CAMK2 gamma) Antibody (C-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q13555
Other Accession	O15378
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**309-338**

CAMK2G (CAMK2 gamma) Antibody (C-term) - 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, CAMK2G, CAMK, CAMK-II, CAMKG

Target/Specificity
This CAMK2G (CAMK2 gamma) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 309-338 amino acids from the C-terminal region of human CAMK2G (CAMK2 gamma).

Dilution
WB~~1:2000
IHC-P~~1:50~100
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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
CAMK2G (CAMK2 gamma) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

CAMK2G (CAMK2 gamma) Antibody (C-term) - Protein Information

Name CAMK2G

Synonyms CAMK, CAMK-II, CAMKG

Function Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca(2+)/calmodulin-binding and autophosphorylation, and is involved in sarcoplasmic reticulum Ca(2+) transport in skeletal muscle and may function in dendritic spine and synapse formation and neuronal plasticity (PubMed:16690701). In slow-twitch muscles, is involved in regulation of sarcoplasmic reticulum (SR) Ca(2+) transport and in fast-twitch muscle participates in the control of Ca(2+) release from the SR through phosphorylation of the ryanodine receptor-coupling factor triadin (PubMed:16690701). In the central nervous system, it is involved in the regulation of neurite formation and arborization (PubMed: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

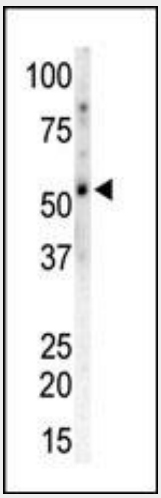
Tissue Location
Expressed in skeletal muscle.

CAMK2G (CAMK2 gamma) Antibody (C-term) - 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

CAMK2G (CAMK2 gamma) Antibody (C-term) - Images



The anti-CAMK2 gamma C-term Pab (Cat. #AP7208a) is used in Western blot to detect CAMK2 gamma in mouse heart tissue lysate.

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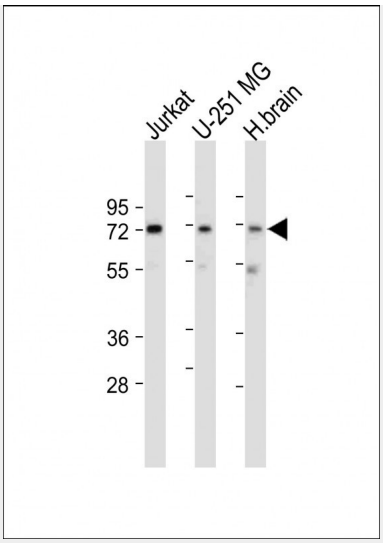
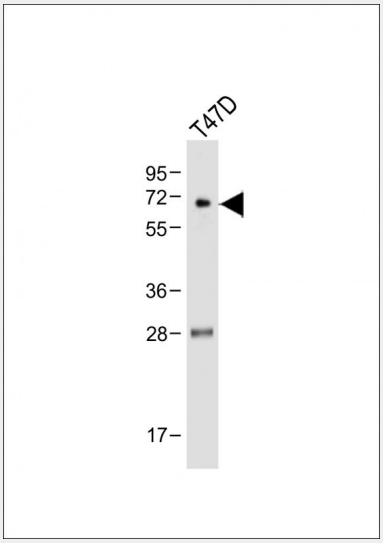


All lanes : Anti-CAMK2G (CAMK2 gamma) Antibody (C-term) at 1:500-1000 dilution Lane 1: Jurkat whole cell lysate Lane 2: U-251 MG whole cell lysate Lane 3: Human brain tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 61 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Anti-CAMK2G (CAMK2 gamma) Antibody (C-term) at 1:500 dilution + T47D whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 61 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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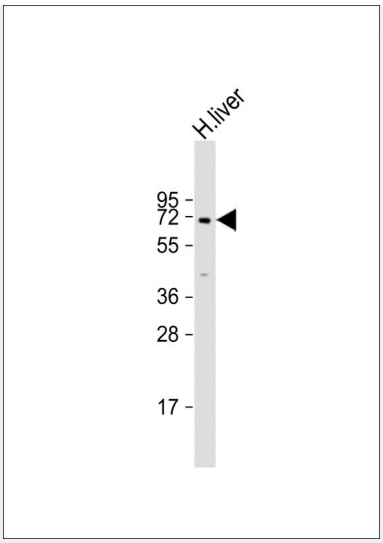
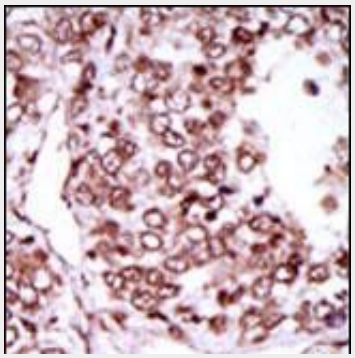
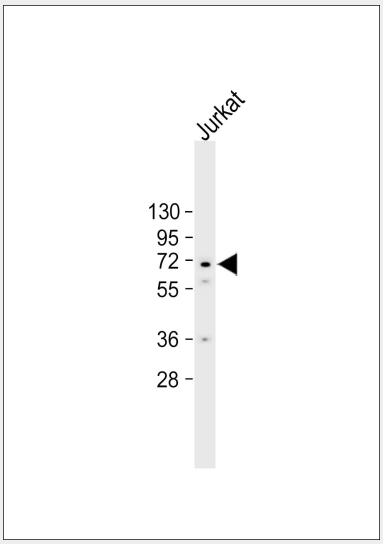


Anti-CAMK2G (CAMK2 gamma) Antibody (C-term) at 1:2000 dilution + human liver lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 63kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



All lanes : Anti-CAMK2G (CAMK2 gamma) Antibody (C-term) at 1:2000 dilution Lane 1: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),

Peroxidase conjugated at 1/10000 dilution. Predicted band size : 61 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

CAMK2G (CAMK2 gamma) Antibody (C-term) - Background

CaM-kinase II (CAMK2) is a prominent Ser/Thr protein kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release. Likely autophosphorylation of Thr-286 allows the kinase to switch from a calmodulin-dependent to a calmodulin-independent state. CAMK2 is composed of four different chains: alpha, beta, gamma, and delta. The different isoforms assemble into homo- or heteromultimeric holoenzymes composed of 8 to 12 subunits.

CAMK2G (CAMK2 gamma) Antibody (C-term) - References

Breen, M.A., et al., Biochem. Biophys. Res. Commun. 236(2):473-478 (1997). Tombes, R.M., et al., Biochim. Biophys. Acta 1355(3):281-292 (1997).

CAMK2G (CAMK2 gamma) Antibody (C-term) - Citations

- Matrine inhibits the growth of natural killer/T-cell lymphoma cells by modulating CaMKIIγ-c-Myc signaling pathway
- Activation of CaMKIIγ potentiates T-cell acute lymphoblastic leukemia leukemogenesis via phosphorylating FOXO3a.