

Datasheet for ABIN2484561

anti-CAMKII gamma antibody (HRP)

5 Images

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Overview

| | |
|--------------|--|
| Quantity: | 100 µg |
| Target: | CAMKII gamma (CAMK2G) |
| Reactivity: | Rat |
| Host: | Mouse |
| Clonality: | Monoclonal |
| Conjugate: | This CAMKII gamma antibody is conjugated to HRP |
| Application: | Western Blotting (WB), Immunohistochemistry (IHC), ELISA, Immunoprecipitation (IP), Immunofluorescence (IF), Immunocytochemistry (ICC), Radioimmunoassay (RIA) |

Product Details

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|-------------------|--|
| Immunogen: | Partially purified rat CaMKII |
| Clone: | 6G9 |
| Isotype: | IgG1 |
| Specificity: | Detects ~50-60 kDa. Recognizes both phosphorylated and non-phosphorylated forms. |
| Cross-Reactivity: | Cow, Human, Mouse, Rat |
| Purification: | Protein G Purified |

Target Details

| | |
|-------------------|--|
| Target: | CAMKII gamma (CAMK2G) |
| Alternative Name: | CaMKII (CAMK2G Products) |

Target Details

| | |
|-----------------|---|
| Background: | <p>CaMKII is an important member of the calcium/calmodulin-activated protein kinase family, functioning in neural synaptic stimulation and T-cell receptor signaling (1, 2). CaMKII is expressed in many different tissues but is specifically found in the neurons of the forebrain and its mRNA is found within the dendrites and the soma of the neuron. The CaMKII that is found in the neurons consist of two subunits of 52 (termed alpha genes) and 60 kDa (beta genes). CaMKII has catalytic and regulatory domains, as well as an ATP-binding domain, and a consensus phosphorylation site (3-7). The binding of Ca²⁺/calmodulin to its regulatory domain releases its auto inhibitory effect and activates the kinase (8). This kinase activation results in autophosphorylation at threonine 286 (8). The threonine phosphorylation state of CaMKII can be regulated through PP1/PKA. Whereas PP1 (protein phosphatase 1) dephosphorylates phospho-CaMKII at Thr286, PKA (protein kinase A) prevents this dephosphorylation (9). Autophosphorylation also enables CaMKII to attain an enhanced affinity for NMDA receptors in postsynaptic densities (10-12).</p> |
| Gene ID: | 12322 |
| NCBI Accession: | NP_033922 |
| UniProt: | P11798 |
| Pathways: | WNT Signaling , Interferon-gamma Pathway , Hormone Transport , Myometrial Relaxation and Contraction , Regulation of long-term Neuronal Synaptic Plasticity |

Application Details

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|--------------------|--|
| Application Notes: | <ul style="list-style-type: none">• WB (1:10000)• IHC (1:2000)• ICC/IF (1:50)• optimal dilutions for assays should be determined by the user. |
| Comment: | 0.1 µg/ml was sufficient for detection of CamKII in 20 µg rat brain tissue extract by colorimetric immunoblot analysis using Goat Anti-Mouse IgG:AP as the secondary. |
| Restrictions: | For Research Use only |

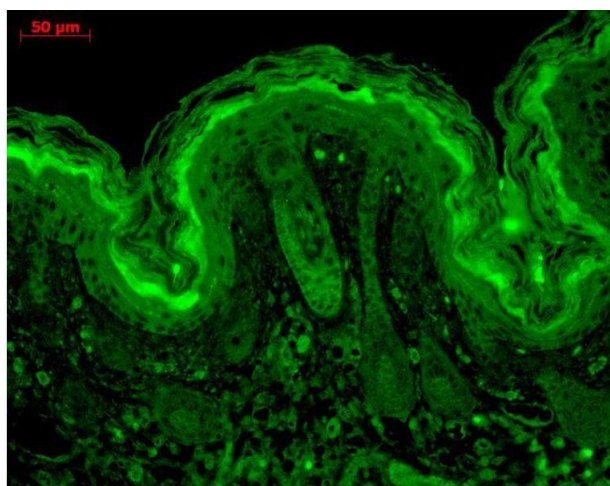
Handling

| | |
|----------------|---|
| Format: | Liquid |
| Concentration: | 1 mg/mL |
| Buffer: | PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated |

Handling

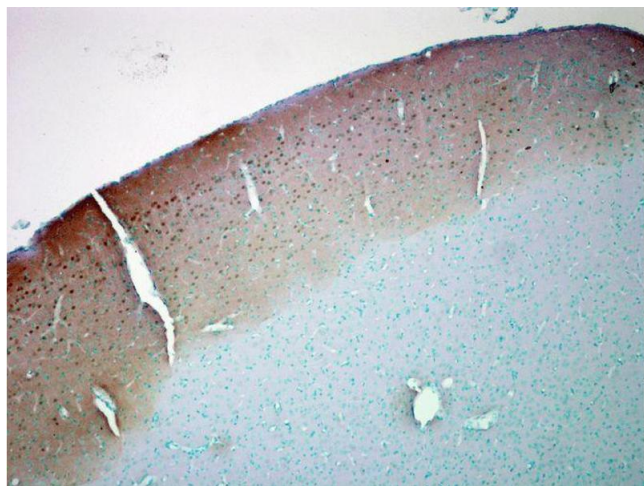
| | |
|--------------------|--|
| Preservative: | Sodium azide |
| Precaution of Use: | This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only. |
| Storage: | 4 °C |
| Storage Comment: | Conjugated antibodies should be stored at 4°C |

Validation report #103875 for Immunofluorescence (IF)



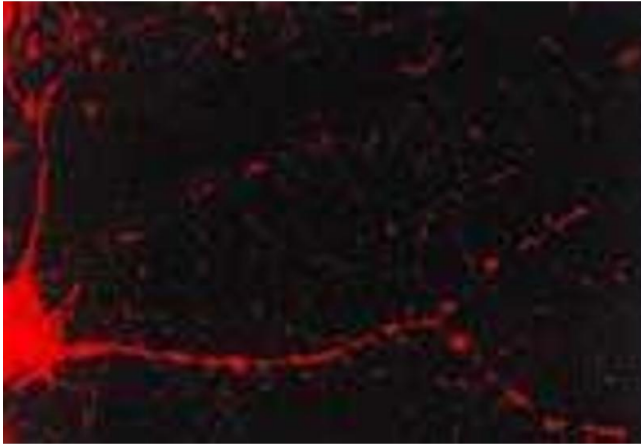
Immunohistochemistry

Image 1. Immunohistochemistry analysis using Mouse Anti-CaMKII Monoclonal Antibody, Clone 6G9 . Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-CaMKII Monoclonal Antibody at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Hair follicles, epidermis.



Immunohistochemistry

Image 2. Immunohistochemistry analysis using Mouse Anti-CaMKII Monoclonal Antibody, Clone 6G9 . Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-CaMKII Monoclonal Antibody at 1:10000 for 12 hours at 4°C. Secondary Antibody: Biotin Goat Anti-Mouse at 1:2000 for 1 hour at RT. Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 200 μl for 2 minutes at RT. Magnification: 40x.



Immunofluorescence (fixed cells)

Image 3. Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-CaMKII Monoclonal Antibody, Clone 6G9 . Tissue: dissociated hippocampal neurons. Species: Mouse. Fixation: Cold 4% paraformaldehyde/0.2% glutaraldehyde in 0.1M sodium phosphate buffer. Primary Antibody: Mouse Anti-CaMKII Monoclonal Antibody at 1:1000 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Mouse IgG (green) at 1:50 for 30 minutes at RT. Magnification: 10X. Courtesy of: Mary Kennedy, Caltech.

Please check the [product details page](#) for more images. Overall 5 images are available for ABIN2484561.