Product Datasheet

CaMKII Antibody (RPE) (orb147046)

Catalog Number	orb147046
Category	Antibodies
Description	Mouse monoclonal to CaMKII (RPE). CaMKII is an important member of calcium/calmodulin- activated protein kinase family, functioning in neural synaptic stimulation and T-cell receptor signaling. 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+ auto inhibitory effect and activates the kinase. /calmodulin to its regulatory domain releases its This kinase activation results in auto phosphorylation at threonine 286. 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. Auto phosphorylation also enables CaMKII to attain an enhanced affinity for NMDA receptors in postsynaptic densities (10-12)..
Target	CaMKII
Clonality	Monoclonal
Species/Host	Mouse
Isotype	IgG1
Conjugation	RPE
Reactivity	Bovine, Human, Mouse, Rat
Concentration	1 mg/ml
Buffer/Preservatives	95.46mM Phosphate, 2.48mM MES and 2mM EDTA

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Purification	Protein G Purified
Immunogen	Partially purified rat CaMKII
UniProt ID	**P11798**
MW	50-60kDa
Tested applications	ELISA, ICC, IF, IHC, IP, RIA, WB
Dilution range	WB (1:10000), IHC (1:2000), ICC/IF (1:50)
Application notes	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.
Specificity	Detects ~50-60kDa. Recognizes both phosphorylated and non-phosphorylated forms.
Clone Number	6G9
Storage	Conjugated antibodies should be stored according to the product label
Note	For research use only
Entrez	**12322**
NCBI	**NP_033922.1**
Expiration Date	12 months from date of receipt.

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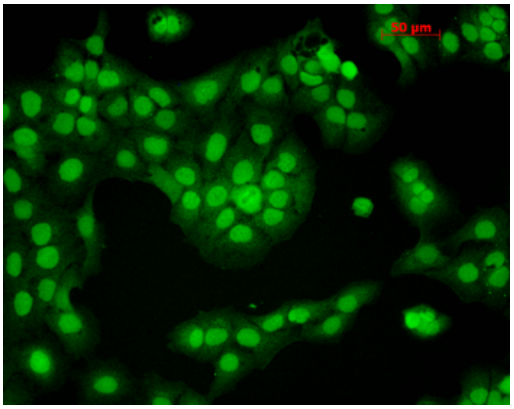
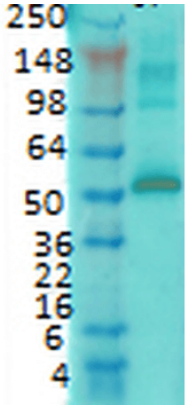
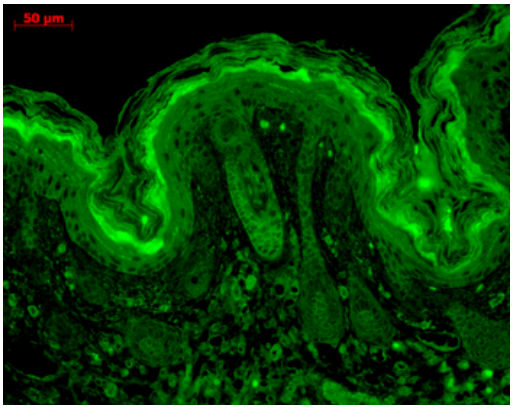


Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-CaMKII Monoclonal Antibody, Clone 6G9. Tissue: HaCaT cells. Species: Human. Fixation: Cold 100% methanol for 10 minutes at -20°C. Primary Antibody: Mouse Anti-CaMKII Monoclonal Antibody at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Nuclear Staining.



Western Blot analysis of Rat brain membrane lysate showing detection of CaMKII protein using Mouse Anti-CaMKII Monoclonal Antibody, Clone 6G9. Primary Antibody: Mouse Anti-CaMKII Monoclonal Antibody at 1:1000.



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.

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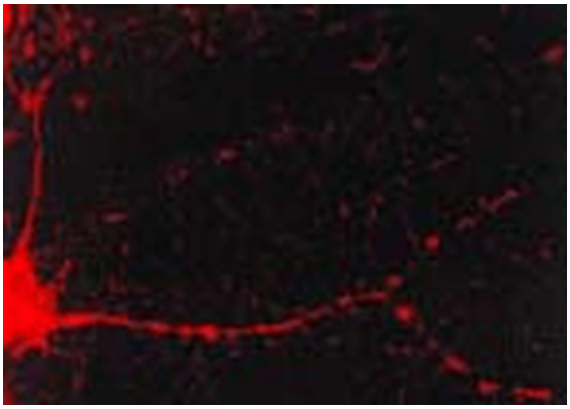
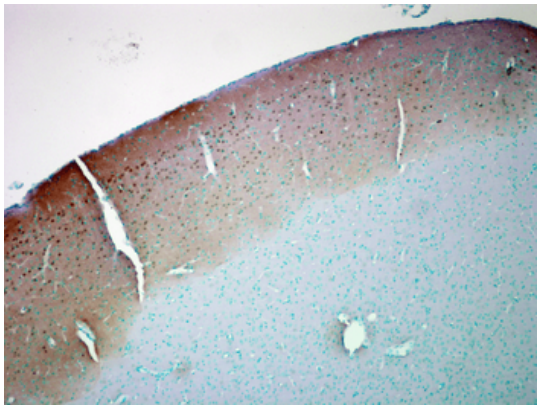


Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-CaMKII Monoclonal Antibody, Clone 6G9. Tissue: dissociated hippocampal neurons. Species: Mouse. Fixation: Cold 4% paraformaldehyde/0.2% glutaraldehyde in 0.1M sodium phosphate buffer. Primary Antibody: Mouse Anti-CaMKII Monoclonal Antibody 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.



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.

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