Anti-phospho CaMKII Monoclonal Antibody

ORDERING INFORMATION

Catalog No.: 56454 (clone 22B1)
Size: 100ug in PBS, pH 7.4, purified by Protein G affinity chromatography.

BACKGROUND

CaMKII, a member of the calcium / calmodulin-activated protein kinas family, functions in neural synapatic stimulation and T-cell receptor signaling. CaMKII is expressed in many tissues, but it is specifically found in the neurons of the forebrain, and its mRNA is found within the dendrites and the soma of the neuron. CaMKII in neurons consists of two subunits of 52 (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. Binding of calcium / calmodulin to its regulatory domain releases its auto-inhibitory effect and activates the kinase. This kinase activation results in autophosphorylation at threonine 286. Autophosphorylation confers enhanced affinity of CaMKII for NMDA receptors in postsynaptic densities.

SPECIFICATION SUMMARY

Antigen: Synthetic peptide based on sequence from rat/mouse CaMKII alpha (aa 281-294), thiophosphorylated at residue Thr286 conjugated to a protein carrier.
Host Species: Mouse
Antibody Class: IgG1
Preservatives: 0.09% sodium azide
Other additives: 50% glycerol

SPECIFICITY

This antibody recognizes the phosphorylated form of mouse and rat CaMKII. It does not react with non-phosphorylated CaMKII.

APPLICATIONS

Immunoblotting: use at 1ug/ml. A band of ~50 kDa is detected.
Immunofluorescence: use at 10ug/ml.
These are recommended concentrations. User should determine optimal concentrations for their application.
Positive control: Rat brain tissue extract.

DILUTION INSTRUCTIONS

Dilute in PBS or medium which is identical to that used in the assay system.

STORAGE AND STABILITY

This antibody is stable for at least one (1) year at -20°C. Avoid repeated freezing and thawing.

For in vitro investigational use only. Not for use in therapeutic or diagnostic procedures.

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