



Rabbit anti CamKII(pT286) Polyclonal Antibody

Alternative Name(s): Calcium/calmodulin-dependent protein kinase II; CAMK, CAMK-II, CAMKG

Order Information

- **Description:** CamKII(pT286)
- **Catalogue:** 600-270
- **Lot:** See label
- **Size:** 100ug/200ul
- **Host:** Rabbit
- **Clone:** nan
- **Application:** IHC(P), WB
- **Reactivity:** Hu

ANTIGEN PREPARATION

A synthetic peptide corresponding to the epitope with a single phosphorylation site Thr 286.

BACKGROUND

Calcium/calmodulin-dependent protein kinase II (CaMKII) is a widely distributed protein kinase that regulates numerous physiological functions. It is a ubiquitous serine/threonine protein kinase which is abundant in brain as a major PSD constituent. This enzyme is composed of distinct but related subunits (alpha, beta, gamma, and delta). The synapse contains densely localized and interacting proteins that enable it to adapt to changing inputs. A Ca²⁺-sensitive protein complex is involved in the regulation of AMPA receptor synaptic plasticity. The complex is comprised of MUPPI, a multi-PDZ domain-containing protein; SynGAP, a synaptic GTPase-activating protein; and the Ca²⁺/calmodulin-dependent kinase CaMKII. In synapses of hippocampal neurons, SynGAP and CaMKII are brought together by direct physical interaction with the PDZ domains of MUPP1, and in this complex, SynGAP is phosphorylated. Ca²⁺+CaM binding to CaMKII dissociates it from the MUPP1 complex, and Ca²⁺ entering via the NMDAR drives the dephosphorylation of SynGAP. The most important autophosphorylation site is Threonine 286, which resides in the vicinity of the autoinhibitory domain.

PURIFICATION

The Rabbit IgG is purified by site-modified Epitope Affinity Purification.

FORMULATION

This affinity purified antibody is supplied in sterile Tris-buffered saline (pH7.2) containing antibody stabilizer

SPECIFICITY

This antibody recognizes CamKII(pT286) with a phosphorylated site of Threonine 286. It does not cross-react with non-phosphospecific peptide.

STORAGE

The antibodies are stable for 24 months from date of receipt when stored at -20oC to -70oC. The antibodies can be stored at 2oC-8oC for three month without detectable loss of activity. Avoid repeated freezing-thawing cycles.

APPLICATIONS/SUGGESTED WORKING DILUTIONS*

- Western Blot: 0.1-1 µg/ml
- ELISA: 0.01-0.1 µg/ml
- Immunoprecipitation: 2-5 µg/ml
- IHC: 2-10 µg/ml
- Flow cytometry: Not tested
- Molecular Weight: 50.0
- Positive Control: Kidney Tissue
- Cellular Location: Cell Membrane

FOR RESEARCH USE ONLY.

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*Optimal dilutions should be determined by researchers for the specific applications.

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DATA ATTACHMENTS

MW (kDa) **1**

250-

150-

100-

75-

50-

37-

25-



Western Blot: Blot: The rat brain tissue lysate was immunoblotted by Rabbit anti-CamKII (pT286) (Cat#600-270) antibody at 1:500. Observed a major immunoreactive band at molecular weight ~50 kDa.

REFERENCES

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