

Product datasheet for **TA326521**

Camk2a Mouse Monoclonal Antibody [Clone ID: 22B1]

Product data:

Product Type:	Primary Antibodies
Clone Name:	22B1
Applications:	IF, WB
Recommended Dilution:	1u/ml was sufficient for detection of 0.2ug CAMKII by colorimetric immunoblot
Reactivity:	Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Synthetic peptide
Formulation:	PBS pH7.4, 50% glycerol
Concentration:	lot specific
Purification:	Protein G Purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	calcium/calmodulin-dependent protein kinase II alpha
Database Link:	NP_037052 Entrez Gene 25400 Rat P11275



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Background:

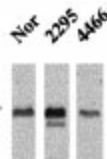
CaMKII is an important member of calcium/calmodulin- activated protein kinase family, functioning in neural synaptic stimulation and T-cell receptor signaling . CaMKII is expressed in many different tissues but is specifically found in the neurons of the forebrain and its mRNA is found within the dendrites 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 . The binding of Ca²⁺ auto inhibitory effect and activates the kinase . /calmodulin to its regulatory domain releases its This kinase activation results in autophosphorylation 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 . Autophosphorylation also enables CaMKII to attain an enhanced affinity for NMDA receptors in postsynaptic densities .

Synonyms:

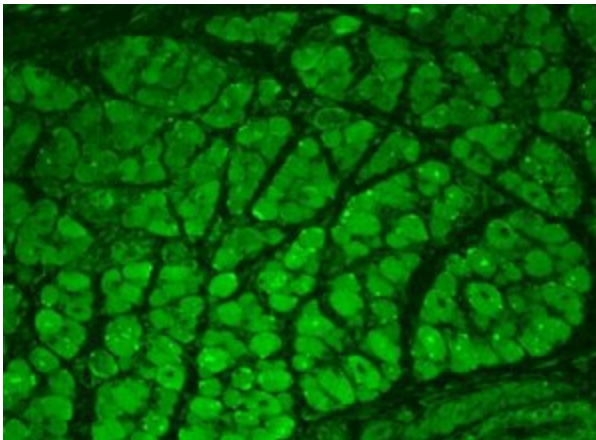
CAMKA; CaMKIINalpha; KIAA0968

Note:

Detects phosphorylated CaMKII from rat tissues. This antibody is specific for α and β subunits of CaMKII only when they are phosphorylated at Thr-286/287 (in β).

Product images:


Three western blot analyses of CaMKII and NFAT phosphorylation in ventricles of 14 day old mice over-expressing CaMK.



CaMKII visualized using the antibody