

Product datasheet for **TA388996**

Phospho-Camk2a (pThr306) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:1000 WB Brain: 1:1000
Reactivity:	Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Synthetic phospho-peptide corresponding to amino acid residues surrounding Thr306 of rat CaMKII, conjugated to keyhole limpet hemocyanin (KLH).
Specificity:	Specific for endogenous levels of the ~50 kDa α -CaM Kinase II and the ~60 kDa β -CaM Kinase II proteins phosphorylated at Thr306. Immunolabeling is completely eliminated by treatment with λ -phosphatase. It has been reported that this antibody may recognize some level of non-phosphorylated pure recombinant protein, but in our hands (as shown in our WB image) in native tissue, the antibody reacts in a phospho-specific manner.
Formulation:	10 mM HEPES (pH 7.5), 150 mM NaCl, 100 μ g per ml BSA and 50% glycerol.
Concentration:	lot specific
Purification:	Antigen Affinity Purified from Pooled Serum
Conjugation:	Unconjugated
Storage:	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.
Stability:	After date of receipt, stable for at least 1 year at -20°C.
Predicted Protein Size:	50/60
Gene Name:	calcium/calmodulin-dependent protein kinase II alpha
Database Link:	Entrez Gene 25400 Rat Q9UQM7



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- Background:** Ca²⁺/Calmodulin-Dependent Protein Kinase II (CaM Kinase II) is a multifunctional calcium and calmodulin-dependent protein kinase that mediates cellular responses to a wide variety of intercellular signals (Kennedy, 1998; Schulman and Hanson, 1993). CaM Kinase II has been shown to regulate diverse cellular functions including synaptic plasticity, neurotransmitter synthesis and release, gene expression, ion channel function, carbohydrate metabolism, cytoskeletal function, and Ca²⁺-homeostasis (Gleason et al., 2003; Soderling, 2000; Hudmon and Schulman, 2002). Phosphorylation of Thr-286 on the kinase produces an autonomously active form of CaM Kinase II (Meng et al., 2003; Picciotto et al., 1993). CaMKII α autophosphorylation at Thr-286 and Thr-305/Thr-306 has recently been shown to regulate kinase activity and modulate subcellular targeting and is critical for normal synaptic plasticity and learning and memory (Baucum et al., 2015).
- Synonyms:** CAMKA; CaMKIINalpha; KIAA0968
- Note:** Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.