



# Anti-Ca<sup>2+</sup>/Calmodulin Kinase II (aa 7-20) polyclonal antibody (DPAB2950)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Product Overview</b>	Recognizes the ~60 kDa CaM kinase II protein in rat brain and liver and in mouse brain. As the sequences of rat $\alpha$ -, $\gamma$ -, and $\delta$ -isoforms are conserved over this amino terminal region, this antibody may recognize all three of these isoforms.
<b>Specificity</b>	Mouse, rat
<b>Immunogen</b>	a synthetic peptide (CTRFTDEYQLFEEL) corresponding to amino acids 7-20 of rat multi-functional calmodulin-dependent kinase II $\delta$ -isoform, conjugated to KLH
<b>Isotype</b>	IgG
<b>Source/Host</b>	Rabbit
<b>Species Reactivity</b>	Rat
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	WB
<b>Format</b>	Liquid. In 100 mM Tris-glycine, pH 7.0
<b>Preservative</b>	None
<b>Storage</b>	-20°C. Avoid freeze/thaw

## BACKGROUND

<b>Introduction</b>	Ca <sup>2+</sup> /calmodulin-dependent protein kinases II or CaM kinases II are serine/threonine-specific protein kinases that are regulated by the Ca <sup>2+</sup> /calmodulin complex. CaMKII is involved in many
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signaling cascades and is thought to be an important mediator of learning and memory. CaMKII is also necessary for Ca<sup>2+</sup> homeostasis and reuptake in cardiomyocytes chloride transport in epithelia, positive T-cell selection, and CD8 T-cell activation. Misregulation of CaMKII is linked to Alzheimer's disease, Angelman's syndrome, and heart arrhythmia. Calcium/calmodulin-dependent protein kinase II (CaMKII) is an enzyme that accounts for 1-2% of all of the proteins in the brain. This kinase can exist as 28 different isoforms. The isoforms of CaMKII derive from the alpha, beta, gamma, and delta genes.

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**Keywords**

Ca<sup>2+</sup>/calmodulin-dependent protein kinase II; CaMKII; CaMK2A; CaMK2B; CaMK2D; CaMK2G

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