

#4032 Store at -20°C

CaMKIV Antibody



Cell Signaling
TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R	Endogenous	58, 60: human. 61, 63: rat and mouse.	Rabbit	#Q16566	814

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
	Immunoprecipitation	1:50
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	CaMKIV Antibody detects total levels of endogenous CaMKIV.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide around amino acid 282-300 of human CaMKIV. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	CaMKIV is an important member of calcium/calmodulin-activated kinases. CaMKIV signaling has been related to long-term neural potentiation and memory (1,2), as well as T-cell receptor signaling (3). CaMKIV has catalytic and regulatory domains. The Ca ²⁺ /calmodulin-dependent CaMKK phosphorylates CaMKIV, releasing the autoinhibitory effect and thus activating the kinase (4-6). The activated CaMKIV further autophosphorylates itself at Thr196 (or Thr200 in human) to render the kinase constitutively active (5). The threonine phosphorylation state of CaMKIV can be downregulated by PP2A dephosphorylation.	
Background References	<ol style="list-style-type: none"> 1. Kang, H. et al. (2001) <i>Cell</i> 106, 771-783. 2. Kasahara, J. et al. (2001) <i>J. Biol. Chem.</i> 276, 24044-24050. 3. Yu, C.T. et al. (2001) <i>J. Immunol.</i> 166, 284-292. 4. Chatila, T. et al. (1996) <i>J. Biol. Chem.</i> 271, 21542-21548. 5. Means, A.R. (2000) <i>Mol. Endocrinol.</i> 14, 4-13. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting IP: Immunoprecipitation
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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