

#4032 Store at -20°C

# CaMKIV Antibody

✓ 100 µl (10 western blots)

Orders ■ 877-616-CELL (2355) orders@cellsignal.com  
Support ■ 877-678-TECH (8324) info@cellsignal.com  
Web ■ www.cellsignal.com

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #814  
Swiss-Prot Acc. #Q16566

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, M, R	58, 60 kDa (H) 61, 63 (M, R)	Rabbit**

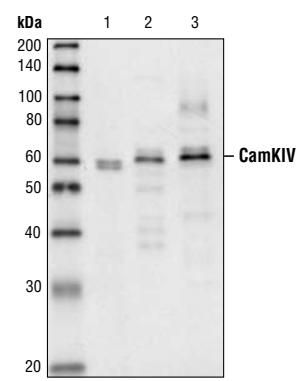
**Background:** CaMKIV is an important member of calcium/calmodulin-activated kinases. CaMKIV signaling has been related to long-term neural potentiation and memory (1,2), as well as T-cell receptor signaling (3). CaMKIV has catalytic and regulatory domains. The Ca<sup>2+</sup>/calmodulin-dependent CaMKK 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.

**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 References:**

- (1) Kang, H. et al. (2001) *Cell* 106, 771-783.
- (2) Kasahara, J. et al. (2001) *J. Biol. Chem.* 276, 24044-24050.
- (3) Yu, C.T. et al. (2001) *J. Immunol.* 166, 284-292.
- (4) Chatila, T. et al. (1996) *J. Biol. Chem.* 271, 21542-21548.
- (5) Means, A.R. (2000) *Mol. Endocrinol.* 14, 4-13.



Western blot analysis of extracts from human Jurkat cells (lane 1), rat brain (lane 2) and mouse brain (lane 3), using CaMKIV Antibody.

**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.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.