

Phospho-CaMKK2 (Ser511) Antibody

✓ 100 µl
(10 western blots)

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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications W Endogenous	Species Cross-Reactivity* H, M, R, (Mk)	Molecular Wt. 68 kDa	Source Rabbit**
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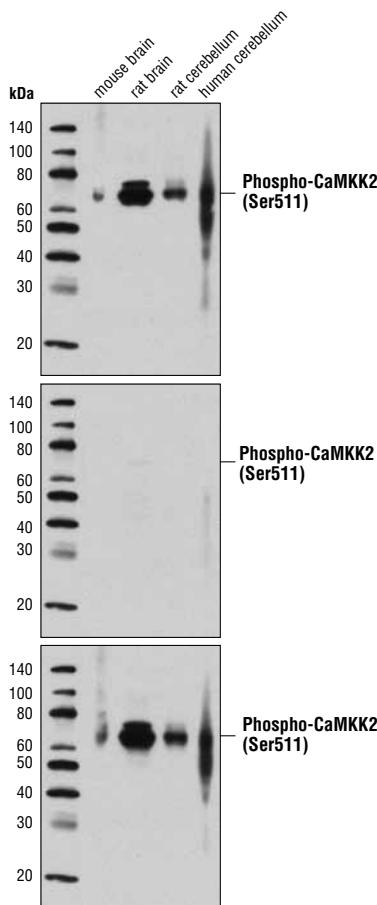
Background: Calcium/Calmodulin-dependent Protein Kinase Kinase 2 (CaMKK2) is a member of the CaMK family that contains a central Ser/Thr kinase domain followed by a regulatory domain consisting of overlapping autoinhibitory and CaM-binding regions (1). CaMKK2 can be distinguished from other CaMK family members by the presence of a unique Pro/Arg/Gly-rich insert following the ATP-binding domain (2). CaMKK2 phosphorylates CaMKI at Thr177 and CaMKIV at Thr200 (3). CaMKK2 also phosphorylates AMPK α in response to calcium (4). CaMKK2 has been implicated in long-term memory formation (5) and adipocyte development (6). CaMKK2 is phosphorylated at Ser511 by death-associated protein kinase (DAPK) in a signaling cascade thought to be involved in neuronal death (7).

Specificity/Sensitivity: Phospho-CaMKK2 (Ser511) Antibody recognizes endogenous levels of CaMKK2 protein only when phosphorylated at Ser511.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser511 of human CaMKK2 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Tokumitsu, H. et al. (1997) *Biochemistry* 36, 12823-7.
- (2) Tokumitsu, H. et al. (1995) *J Biol Chem* 270, 19320-4.
- (3) Anderson, K.A. et al. (1998) *J Biol Chem* 273, 31880-9.
- (4) Hawley, S.A. et al. (2005) *Cell Metab* 2, 9-19.
- (5) Peters, M. et al. (2003) *J Neurosci* 23, 9752-60.
- (6) Lin, F. et al. (2011) *Endocrinology* 152, 3668-79.
- (7) Schumacher, A.M. et al. (2004) *Biochemistry* 43, 8116-24.



Western blot analysis of extracts from various tissues using Phospho-CaMKK2 (Ser511) Antibody (upper). The phospho-specificity of the antibody was verified by blocking with a phosphopeptide (middle) or nonphosphopeptide (lower).

Entrez-Gene ID #10645
UniProt Acc. #Q96RR4

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

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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

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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.