

Store at
-20°C

#16737

Phospho-CaMKK2 (Ser495) Antibody



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Entrez-Gene ID #10645
UniProt ID #Q96RR4

New 12/18

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

Applications W Endogenous	Species Cross-Reactivity* H, M, (R)	Molecular Wt. 68, 70 kDa	Source Rabbit**
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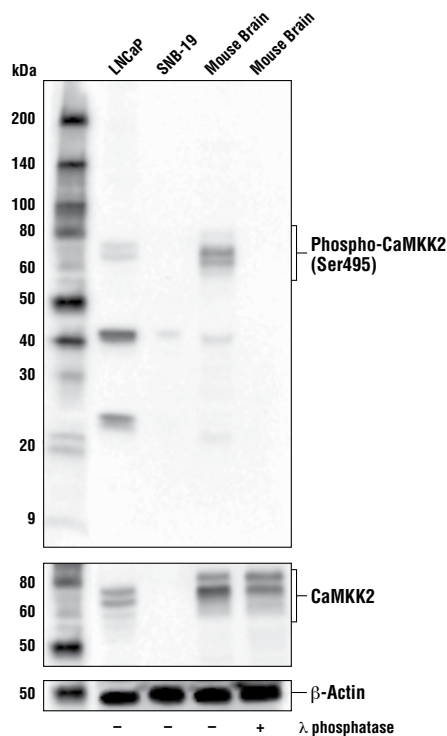
Background: Calcium/Calmodulin-dependent Protein Kinase Kinase 2 (CaMKK2) is a member of the CaMK family that contains a central Ser/Thr kinase domain followed by a regulatory domain consisting of overlapping autoinhibitory and CaM-binding regions (1). CaMKK2 can be distinguished from other CaMK family 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). Multiple CaMKK2 phosphorylation sites have been identified, including Ser495, and C-terminal phosphorylation of the CaMKK2 autoinhibitory region may regulate its function and localization (8).

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.
- (8) Nakanishi, A. et al. (2017) *J Biol Chem* 292, 19804-13.

Specificity/Sensitivity: Phospho-CaMKK2 (Ser495) Antibody recognizes endogenous levels of CaMKK2 protein only when phosphorylated at Ser495. Bands of unknown origin are observed at 42 kDa and 25 kDa.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser495 of human CaMKK2 protein. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from LNCaP and SNB-19 cells, and mouse brain, untreated (-) or treated with λ phosphatase (+), using Phospho-CaMKK2 (Ser495) Antibody (upper), CaMKK2 (D8D4D) Rabbit mAb #16810 (middle), and β -Actin (D6A8) Rabbit mAb #8457 (lower).

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/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 and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

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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.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: 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.