

#12818 Store at -20°C

## Phospho-CaMKK2 (Ser511) Antibody


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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	H M R	Endogenous	68	Rabbit	#Q96RR4	10645

<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	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.	
<b>Specificity / Sensitivity</b>	Phospho-CaMKK2 (Ser511) Antibody recognizes endogenous levels of CaMKK2 protein only when phosphorylated at Ser511.	
<b>Species predicted to react based on 100% sequence homology:</b>	Monkey	
<b>Source / Purification</b>	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.	
<b>Background</b>	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 AMPKα 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).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Tokumitsu, H. et al. (1997) <i>Biochemistry</i> 36, 12823-7.</li> <li>2. Tokumitsu, H. et al. (1995) <i>J Biol Chem</i> 270, 19320-4.</li> <li>3. Anderson, K.A. et al. (1998) <i>J Biol Chem</i> 273, 31880-9.</li> <li>4. Hawley, S.A. et al. (2005) <i>Cell Metab</i> 2, 9-19.</li> <li>5. Peters, M. et al. (2003) <i>J Neurosci</i> 23, 9752-60.</li> <li>6. Lin, F. et al. (2011) <i>Endocrinology</i> 152, 3668-79.</li> <li>7. Schumacher, A.M. et al. (2004) <i>Biochemistry</i> 43, 8116-24.</li> </ol>	

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