

Phospho-CaMKK2 (Ser511) Antibody



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	68	Rabbit	#Q96RR4	10645

Product Usage Information

Application

Western Blotting

Dilution

1:1000

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

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

Species predicted to react based on 100% sequence homology

Monkey

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

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).

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.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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