

# CaMKK $\beta$ (239CT7.5.3): sc-517319

## BACKGROUND

The Ca<sup>2+</sup>/calmodulin-dependent protein kinases (CaM kinases) are a structurally related subfamily of Serine/Threonine kinases that includes CaMKI, CaMKII and CaMKIV. CaMKI and CaMKIV are stimulated by Ca<sup>2+</sup> and CaM, but phosphorylation by a CaMK is also required for full activation. CaMKK and CAMKK function to activate CaMKI through the specific phosphorylation of the regulatory threonine residue at position 177. CAMKK is also capable of phosphorylating CAMKIV on Threonine residue 200.

## REFERENCES

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3. Tombes, R.M., et al. 1995. G<sub>1</sub> cell cycle arrest apoptosis are induced in NIH 3T3 cells by KN-93, an inhibitor of CaMK-II (the multifunctional Ca<sup>2+</sup>/CaM kinase). *Cell Growth Differ.* 6: 1063-1070.
4. Hama, N., et al. 1995. Calcium/calmodulin-dependent protein kinase II downregulates both calcineurin and protein kinase c-mediated pathways for cytokine gene transcription in human T cells. *J. Exp. Med.* 181: 1217-1222.
5. Park, I.K., et al. 1995. Activation of Ca<sup>2+</sup>/calmodulin-dependent protein kinase (CaM-kinase) IV by CaM-kinase kinase in Jurkat T lymphocytes. *J. Biol. Chem.* 270: 30464-30469.
6. Tokumitsu, H., et al. 1995. Characterization of a CaM-kinase cascade: molecular cloning and expression of calcium/calmodulin-dependent protein kinase kinase. *J. Biol. Chem.* 270: 19320-19324.
7. Anderson, K.A., et al. 1998. Components of a calmodulin-dependent protein kinase cascade. Molecular cloning, functional characterization and cellular localization of Ca<sup>2+</sup>/calmodulin-dependent protein kinase kinase beta. *J. Biol. Chem.* 273: 31880-31889.

## CHROMOSOMAL LOCATION

Genetic locus: CAMKK2 (human) mapping to 12q24.31; Camkk2 (mouse) mapping to 5 F.

## SOURCE

CaMKK $\beta$  (239CT7.5.3) is a mouse monoclonal antibody raised against a recombinant protein corresponding to CaMKK $\beta$  of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

CaMKK $\beta$  (239CT7.5.3) is recommended for detection of CaMKK $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for CaMKK $\beta$  siRNA (h): sc-38955, CaMKK $\beta$  siRNA (m): sc-38956, CaMKK $\beta$  shRNA Plasmid (h): sc-38955-SH, CaMKK $\beta$  shRNA Plasmid (m): sc-38956-SH, CaMKK $\beta$  shRNA (h) Lentiviral Particles: sc-38955-V and CaMKK $\beta$  shRNA (m) Lentiviral Particles: sc-38956-V.

Molecular Weight of CaMKK $\beta$ : 66 kDa.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.