

CaM Kinase IV (N-terminal region)

Cat. # CM2991

Host Mouse Monoclonal IgG1

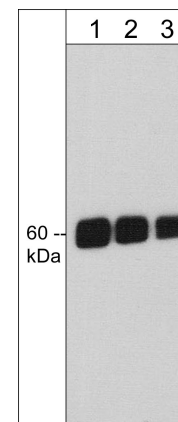
Size 100 µl

Background:

Hormones, growth factors and other cell signals cause increases in cytosolic Ca^{2+} , which leads to cellular responses mediated by various Ca^{2+} -binding proteins. Calmodulin (CaM) is a primary receptor for Ca^{2+} in cells. CaM functions as an allosteric activator of many enzymatic proteins including CaM kinases. CaM kinase IV is an important member of the CaM kinase family that has roles in neuronal long-term potentiation and memory, as well as T-cell receptor signaling. The Ca^{2+} /calmodulin-dependent CaMKK phosphorylates CaM kinase IV, releasing the autoinhibitory effect and thus activating the kinase. The activated CaMKIV further autophosphorylates itself at Thr-200 to render the kinase constitutively active. The threonine phosphorylation state of CaMKIV can be downregulated by PP2A dephosphorylation.

References

- Kang, H. et al. (2001) Cell 106:771.
 Kasahara, J. et al. (2001) J. Biol. Chem. 276:24044.
 Racioppi, L. & Means, A.R. (2008) Trends Immunol. 29(12):600.



Western blot of human Jurkat cell lysate. The blot was probed with mouse monoclonal anti-CaM Kinase IV (N-terminal region) antibody at 1:250 (lane 1), 1:500 (lane 2), or 1:1000 (lane 3).

Immunogen:

Clone (M299) was generated from a recombinant sequence that included amino acids in the N-terminal region of human CaM Kinase IV. This sequence has high homology to rat and mouse CaM Kinase IV.

Applications:

WB	1:1000
ELISA	1:2000
ICC	1:100

End user should determine optimal dilution for their particular applications and experiments. Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

Related Products:

- PM1561 PLC γ 1 (N-terminal Region) Mouse Monoclonal
 PP1491 PLC γ 1 (Tyr-775), phospho-specific Rabbit Polyclonal
 PM2531 PI3 Kinase, p85 (C-terminal region) Mouse Monoclonal
 JL9401 Jurkat Pervanadate Control Lysate
 JL9501 Jurkat + Pervanadate Lysate

Buffer and Storage:

Mouse monoclonal, protein A purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Do not aliquot. Stable for 1 year.

Specificity:

This antibody detects a 60 kDa* protein corresponding to the molecular mass of CaM Kinase IV on SDS-PAGE immunoblots of human Jurkat cells.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

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