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|--------------------------|---------------------------------------------------------------------------------------------------|
| <b>Product name:</b>     | CaMKIV Rabbit Polyclonal Antibody                                                                 |
| <b>Cat number:</b>       | ABN07892                                                                                          |
| <b>Conjugate:</b>        | Unconjugated                                                                                      |
| <b>Size:</b>             | 100µL                                                                                             |
| <b>Clone:</b>            | Polyclonal                                                                                        |
| <b>Concentration:</b>    | 1mg/ml                                                                                            |
| <b>Host:</b>             | Rabbit                                                                                            |
| <b>Isotype:</b>          | IgG                                                                                               |
| <b>Immunogen:</b>        | The antiserum was produced against synthesized peptide derived from human CaMK4. AA range:166-215 |
| <b>Reactivity:</b>       | Human,Mouse,Rat                                                                                   |
| <b>Applications:</b>     | WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:5000-1:10000                          |
| <b>Molecular Weight:</b> | 60kDa                                                                                             |
| <b>Purification:</b>     | Affinity purification                                                                             |
| <b>Form:</b>             | Liquid                                                                                            |
| <b>Buffer:</b>           | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.                |
| <b>Storage:</b>          | Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.      |

**Background:**

The product of this gene belongs to the serine/threonine protein kinase family, and to the Ca(2+)/calmodulin-dependent protein kinase subfamily. This enzyme is a multifunctional serine/threonine protein kinase with limited tissue distribution, that has been implicated in transcriptional regulation in lymphocytes, neurons and male germ cells. [provided by RefSeq, Jul 2008],catalytic activity:ATP + a protein = ADP + a phosphoprotein.,enzyme regulation:Activated by Ca(2+)/calmodulin. Binding of calmodulin may release intrasteric autoinhibition. Must be phosphorylated to be maximally active. Phosphorylated by CAMKK1 or CAMKK2. Autophosphorylation of the N-terminus is required for full activation. In part, activity is independent on Ca(2+)/calmodulin and autophosphorylation of Ser-336 allows to switch to a Ca(2+)/calmodulin-independent state (By similarity). Probably inactivated by serine/threonine protein phosphatase 2A.,function:Calcium/calmodulin-dependent protein kinase belonging to a proposed calcium-triggered signaling cascade. May be involved in transcriptional regulation. May be involved in regulation of microtubule dynamics. In vitro, phosphorylates CREB1, CREBBP, PRM2, MEF2A, MEF2D and STMN1/OP18. May be involved in spermatogenesis. May play a role in the consolidation/retention of hippocampus-dependent long-term memory.,PTM:Autophosphorylated and phosphorylated by CAMKK1 and CAMKK2 (By similarity). Dephosphorylated by serine/threonine protein phosphatase 2A, probably on Thr-200.,similarity:Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily.,similarity:Contains 1 protein kinase domain.,subcellular location:Substantial localization in certain neuronal nuclei. In spermatids associated with chromatin and nuclear matrix.,subunit:Monomer (By similarity). Interacts with serine/threonine protein phosphatase 2A catalytic subunit, PPP2CA or PPP2CB. The interaction with PP2CA or PP2CB is mutually exclusive with binding to Ca(2+)/calmodulin.,tissue specificity:Expressed in epithelial ovarian cancer tissue.,