

CaMKIV Polyclonal Antibody

Catalog No: YT0627

Reactivity: Human; Mouse; Rat

Applications: WB;IHC;IF;ELISA

Target: CaMKIV

Fields: >>Calcium signaling pathway;>>cAMP signaling pathway;>>Longevity

regulating pathway;>>Apelin signaling pathway;>>Osteoclast differentiation;>>Long-term potentiation;>>Neurotrophin signaling

pathway;>>Cholinergic synapse;>>Oxytocin signaling pathway;>>Aldosterone synthesis and secretion;>>Amphetamine addiction;>>Alcoholism;>>Glioma

Gene Name: CAMK4

Protein Name: Calcium/calmodulin-dependent protein kinase type IV

Q16566

P08414

Human Gene Id: 814

Human Swiss Prot

No:

Mouse Swiss Prot

No:

Rat Gene ld: 25050

Rat Swiss Prot No: P13234

Immunogen: The antiserum was produced against synthesized peptide derived from human

CaMK4. AA range:166-215

Specificity: CaMKIV Polyclonal Antibody detects endogenous levels of CaMKIV protein.

Formulation : Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Source: Polyclonal, Rabbit, IgG

Dilution: WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:5000. Not



yet tested in other applications.

Purification: The antibody was affinity-purified from rabbit antiserum by affinity-

chromatography using epitope-specific immunogen.

Concentration: 1 mg/ml

Storage Stability: -15°C to -25°C/1 year(Do not lower than -25°C)

Observed Band: 60kD

Cell Pathway : Calcium;Long-term potentiation;Neurotrophin;

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],

Function: catalytic activity:ATP + a protein = ADP + a phosphoprotein.,enzyme

regulation:Activated by Ca(2+)/calmodulin. Binding of calmodulin may releave

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 i

Subcellular Location:

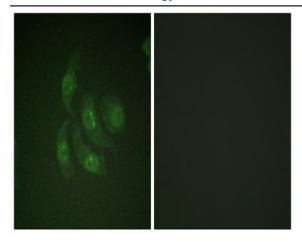
Cytoplasm. Nucleus. Localized in hippocampal neuron nuclei. In spermatids,

associated with chromatin and nuclear matrix (By similarity). .

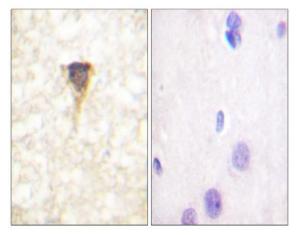
Expression: Expressed in brain, thymus, CD4 T-cells, testis and epithelial ovarian cancer

tissue.

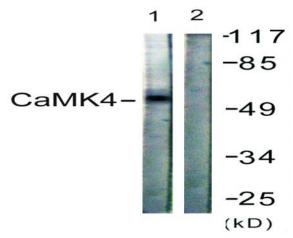
Products Images



Immunofluorescence analysis of HepG2 cells, using CaMK4 Antibody. The picture on the right is blocked with the synthesized peptide.



Immunohistochemistry analysis of paraffin-embedded human brain tissue, using CaMK4 Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from K562 cells, treated with H2O2 100uM 30', using CaMK4 Antibody. The lane on the right is blocked with the synthesized peptide.