

CaMKI α (Phospho Thr177) Rabbit pAb

CatalogNo: YP0913 **Orthogonal Validated** 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB, IHC, IF, ELISA

MW

- 41kD (Observed)

Isotype

- IgG

Storage

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

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

Recommended Dilution Ratios

WB 1:500-1:2000

IHC 1:100-1:300

IF 1:200-1:1000

ELISA 1:5000

Not yet tested in other applications.

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen The antiserum was produced against synthesized peptide derived from human CaMK1-alpha around the phosphorylation site of Thr177. AA range:143-192

Specificity

Phospho-CaMKI α (T177) Polyclonal Antibody detects endogenous levels of CaMKI α protein only when phosphorylated at T177. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):LStAC

Target Information

Gene name CAMK1

Protein Name Calcium/calmodulin-dependent protein kinase type 1

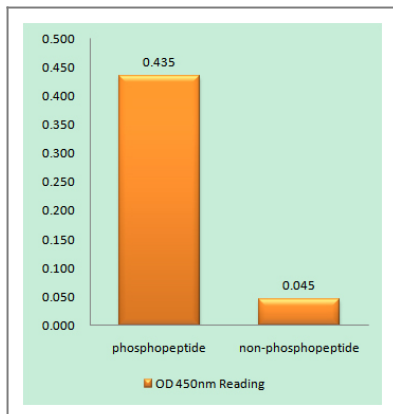
Organism	Gene ID	UniProt ID
Human	8536 ;	Q14012 ;
Mouse	52163 ;	Q91YS8 ;
Rat	171503 ;	Q63450 ;

Cellular Localization Cytoplasm . Nucleus . Predominantly cytoplasmic. .

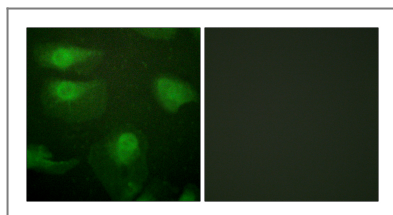
Tissue specificity Widely expressed. Expressed in cells of the zona glomerulosa of the adrenal cortex.

Function Catalytic activity:ATP + a protein = ADP + a phosphoprotein. ,Domain:The autoinhibitory domain overlaps with the calmodulin binding region and interacts in the inactive folded state with the catalytic domain as a pseudosubstrate. ,enzyme regulation:Activated by Ca (2+) /calmodulin. Binding of calmodulin results in a conformational change that generates functional binding sites for both , substrate and ATP , and thus releases intrasteric autoinhibition. Must be phosphorylated to be maximally active. Phosphorylated by CAMKK1 or CAMKK2. ,Function:Calcium/calmodulin-dependent protein kinase belonging to a proposed calcium-triggered signaling cascade involved in a number of cellular processes like transcriptional regulation , hormone production , translational regulation , regulation of actin filament organization and neurite outgrowth. Involved in calcium-dependent activation of the ERK pathway (By similarity) . Recognizes the substrate consensus sequence [MVLIF]-x-R-x (2) -[ST]-x (3) -[MVLIF]. Phosphorylates EIF4G3/eIF4GII. In vitro phosphorylates CREB1 , ATF1 , CTFR , MYL9 , SYN1/synapsin I and SYNII/synapsin II. ,similarity:Belongs to the protein kinase superfamily. ,similarity:Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily. ,similarity:Contains 1 protein kinase domain. ,subcellular location:Predominantly cytoplasmic. ,subunit:Monomer. Interacts with XPO1. ,tissue specificity:Ubiquitous. ,

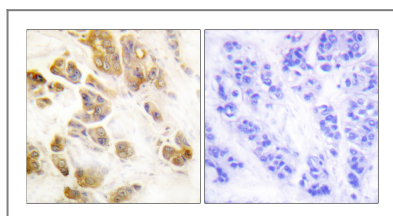
Validation Data



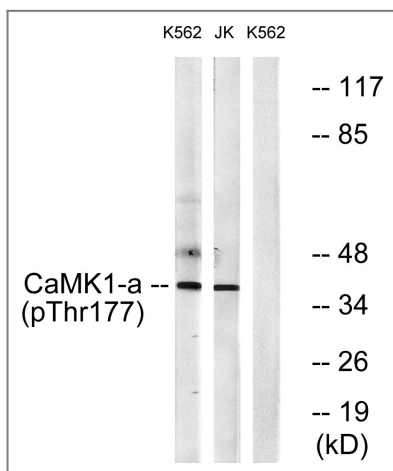
Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using CaMK1-alpha (Phospho-Thr177) Antibody



Immunofluorescence analysis of HeLa cells, using CaMK1-alpha (Phospho-Thr177) Antibody. The picture on the right is blocked with the phospho peptide.



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using CaMK1-alpha (Phospho-Thr177) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from K562 cells treated with insulin 0.01U/ml 15' and Jurkat cells treated with insulin 0.01U/ml 15', using CaMK1-alpha (Phospho-Thr177) Antibody. The lane on the right is blocked with the phospho peptide.

Contact information

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CaMK1α (Phospho Thr177) Rabbit pAb

