

**CaMK1 $\alpha$  (phospho Thr177) Polyclonal Antibody**

<b>Catalog No :</b>	YP0913
<b>Reactivity :</b>	Human;Mouse;Rat
<b>Applications :</b>	WB;IHC;IF;ELISA
<b>Target :</b>	CaMK1 $\alpha$
<b>Fields :</b>	>>Calcium signaling pathway;>>Oxytocin signaling pathway;>>Aldosterone synthesis and secretion;>>Glioma
<b>Gene Name :</b>	CAMK1
<b>Protein Name :</b>	Calcium/calmodulin-dependent protein kinase type 1
<b>Human Gene Id :</b>	8536
<b>Human Swiss Prot No :</b>	Q14012
<b>Mouse Gene Id :</b>	52163
<b>Mouse Swiss Prot No :</b>	Q91YS8
<b>Rat Gene Id :</b>	171503
<b>Rat Swiss Prot No :</b>	Q63450
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human CaMK1- $\alpha$ around the phosphorylation site of Thr177. AA range:143-192
<b>Specificity :</b>	Phospho-CaMK1 $\alpha$ (T177) Polyclonal Antibody detects endogenous levels of CaMK1 $\alpha$ protein only when phosphorylated at T177.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:5000. Not

yet tested in other applications.

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**Purification :** The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

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**Concentration :** 1 mg/ml

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

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**Observed Band :** 41kD

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**Background :** Calcium/calmodulin-dependent protein kinase I is expressed in many tissues and is a component of a calmodulin-dependent protein kinase cascade. Calcium/calmodulin directly activates calcium/calmodulin-dependent protein kinase I by binding to the enzyme and indirectly promotes the phosphorylation and synergistic activation of the enzyme by calcium/calmodulin-dependent protein kinase I kinase. [provided by RefSeq, Jul 2008],

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**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 si

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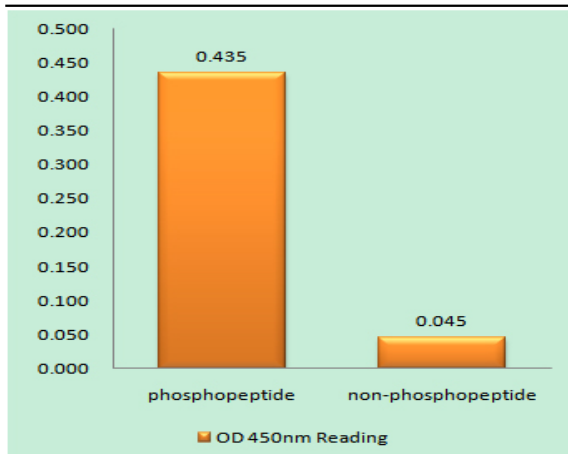
**Subcellular Location :** Cytoplasm . Nucleus . Predominantly cytoplasmic. .

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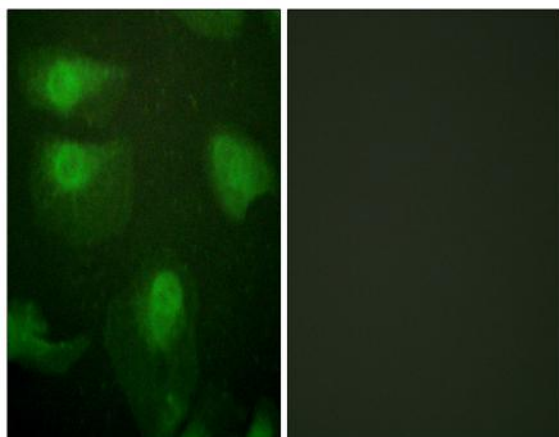
**Expression :** Widely expressed. Expressed in cells of the zona glomerulosa of the adrenal cortex.

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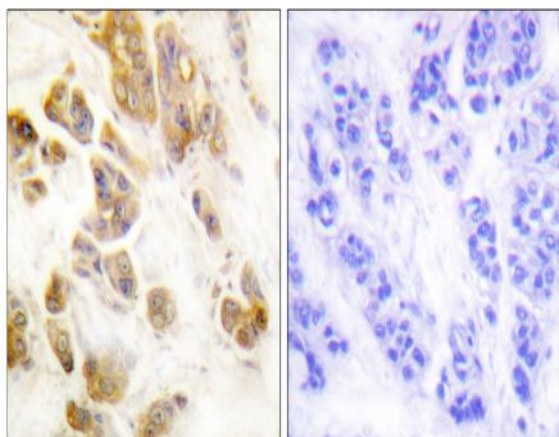
## Products Images



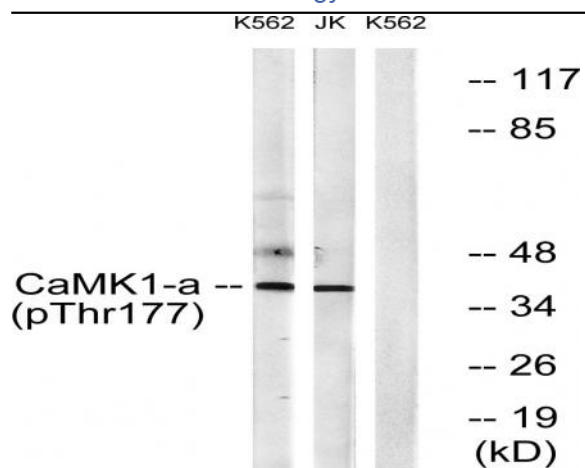
Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using CaMK1-alpha (Phospho-Thr177) Antibody



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.