



Rabbit Anti-CaMK2 alpha antibody

SL0771R

Product Name:	CaMK2 alpha
Chinese Name:	钙/钙调素依赖蛋白激酶2 α 抗体
Alias:	alpha CaMKII; CaMKII alpha; Calcium / Calmodulin Dependent Protein Kinase II G; Calcium calmodulin dependent protein kinase CaM kinase II alpha; Calcium calmodulin dependent protein kinase II alpha-B subunit; Calcium calmodulin dependent protein kinase II; Calcium/calmodulin dependent protein kinase II alpha; Calcium/calmodulin-dependent protein kinase (CaM kinase) II alpha; Calcium/calmodulin-dependent protein kinase II alpha; Calcium/calmodulin-dependent protein kinase II-alpha; Calcium/calmodulin-dependent protein kinase type II subunit alpha; Calcium/calmodulin-dependent protein kinase type IIA; CaM kinase II alpha chain; CaM kinase II alpha subunit; CaM kinase II beta chain; CaM kinase II beta subunit; CaM kinase II delta chain; CaM kinase II delta subunit; CaM kinase II subunit alpha; CAM2; CaMK II alpha subunit; CaMK II beta subunit; CaMK II delta subunit; CaMK-II subunit alpha; CAMK2A; CAMK2B; CAMK2D; CAMKA; CAMKB; CaMKII; CaMK 2a; CaMK2a; KCC2A HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800Flow-Cyt=2ug/test (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	54kDa
Cellular localization:	cytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human CaMK2 alpha:101-200/478
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.

Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	<p>Ca²⁺/CalmodulinDependent Protein Kinase II (CaM Kinase II) is a multifunctional calcium and calmodulindependent protein kinase that mediates cellular responses to a wide variety of intercellular signals. CaM Kinase II has been shown to regulate diverse cellular functions including synaptic plasticity, neurotransmitter synthesis and release, gene expression, ion channel function, carbohydrate metabolism, cytoskeletal function, and Ca²⁺homeostasis. Phosphorylation of Thr286 on the kinase produces an autonomously active form of CaM Kinase II. Autophosphorylation of Thr305 inhibits the activity CaM Kinase II. Phosphorylation at this site appears to reduce the association of CaM Kinase II with the PSD and reduce LTP and learning.</p> <p>Function: CaM-kinase II (CAMK2) is a prominent kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release. Member of the NMDAR signaling complex in excitatory synapses it may regulate NMDAR-dependent potentiation of the AMPAR and synaptic plasticity.</p> <p>Subunit: CAMK2 is composed of four different chains: alpha, beta, gamma, and delta. The different isoforms assemble into homo- or heteromultimeric holoenzymes composed of 8 to 12 subunits. Interacts with BAALC, MPDZ, SYN1, CAMK2N2 and SYNGAP1</p> <p>Subcellular Location: Cell junction, synapse, presynaptic cell membrane. Cell junction, synapse. Note=Postsynaptic lipid rafts.</p> <p>Similarity: Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily. Contains 1 protein kinase domain.</p> <p>SWISS: Q9NZ42</p> <p>Gene ID: 815</p> <p>Database links: Entrez Gene: 282162Cow Entrez Gene: 525416Cow</p>

[Entrez Gene: 530719](#)Cow
[Entrez Gene: 532713](#)Cow
[Entrez Gene: 815](#)Human
[Entrez Gene: 816](#)Human
[Entrez Gene: 817](#)Human
[Entrez Gene: 818](#)Human
[Entrez Gene: 108058](#)Mouse
[Entrez Gene: 12322](#)Mouse
[Entrez Gene: 12323](#)Mouse
[Entrez Gene: 12325](#)Mouse
[Entrez Gene: 171140](#)Rat
[Entrez Gene: 24245](#)Rat
[Entrez Gene: 24246](#)Rat
[Entrez Gene: 25400](#)Rat
[Omim: 114078](#)Human
[SwissProt: Q2HJF7](#)Cow
[SwissProt: Q3MHJ9](#)Cow
[SwissProt: Q13554](#)Human
[SwissProt: Q13555](#)Human
[SwissProt: Q13557](#)Human
[SwissProt: Q9UQM7](#)Human
[SwissProt: P11798](#)Mouse
[SwissProt: P28652](#)Mouse
[SwissProt: Q6PHZ2](#)Mouse
[SwissProt: Q923T9](#)Mouse
[SwissProt: P08413](#)Rat
[SwissProt: P11275](#)Rat
[SwissProt: P11730](#)Rat
[SwissProt: P15791](#)Rat
[Unigene: 725992](#)Human

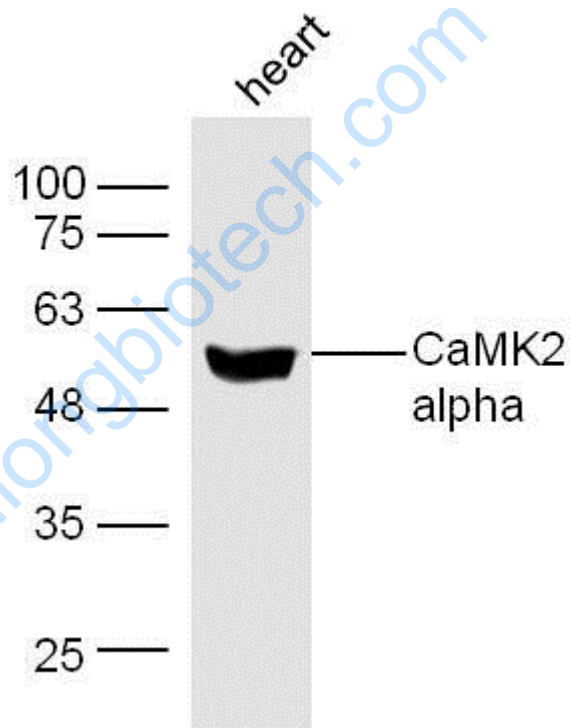
[Unigene: 131530](#)Mouse

[Unigene: 107499](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



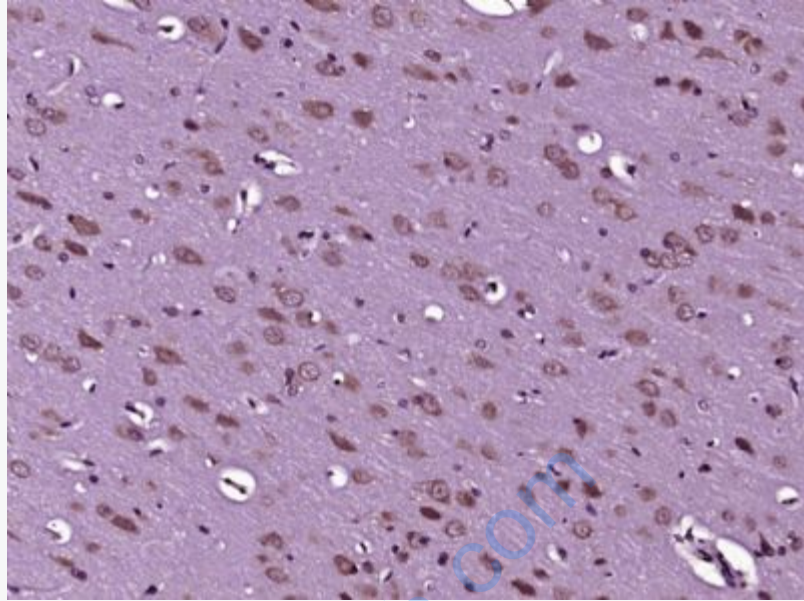
Sample: Heart (Mouse) Lysate at 40 ug

Primary: Anti-CaMK2 alpha (SL0771R) at 1/300 dilution

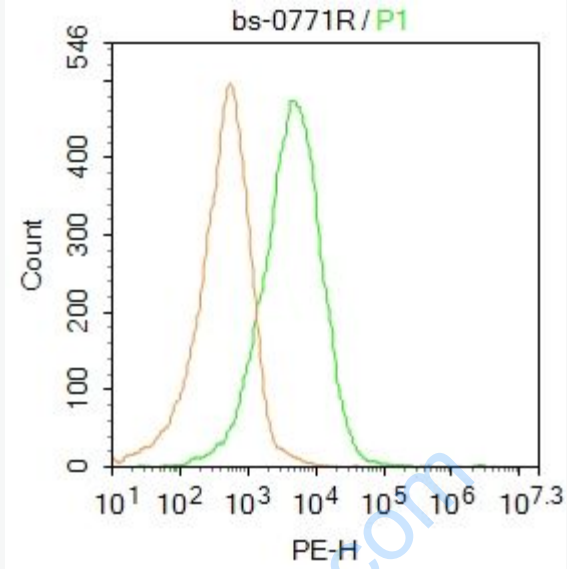
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 54 kD

Observed band size: 54 kD



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CaMK2 alpha) Polyclonal Antibody, Unconjugated (SL0771R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Blank control:MCF7.

Primary Antibody (green line): Rabbit Anti-CaMK2 alpha antibody (SL0771R)

Dilution: 1 μ g /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-PE

Dilution: 2 μ g /test.

Protocol

The cells were incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.