

## Mouse Anti-CAMK2 beta antibody

SLM-51658M

<b>Product Name</b>	CAMK2 beta
<b>Chinese Name</b>	钙/钙调素依赖蛋白激酶 CAMK2B 单克隆抗体
<b>Alias</b>	Calcium/calmodulin dependent protein kinase (CaM kinase) II beta; Calcium/calmodulin dependent protein kinase II beta; Calcium/calmodulin dependent protein kinase IIB; Calcium/calmodulin dependent protein kinase type II beta chain; calcium/calmodulin-dependent protein kinase II beta; Calcium/calmodulin-dependent protein kinase type II subunit beta; CAM 2; CaM kinase II beta chain; CaM kinase II beta subunit; CaM kinase II subunit beta; CaM-kinase II beta chain; CAM2; CAMK 2; CAMK 2B; CaMK II beta subunit; CaMK II subunit beta; CaMK-II subunit beta; CAMK2; Camk2b; CAMKB; CaMKII beta subunit; CaMKIIB; KCC2B_HUMAN; MGC29528; Proline rich calmodulin dependent protein kinase; proline rich calmodulin-dependent protein kinase;
<b>Research Area</b>	Cell biology Neurobiology Signal transduction Cell type markers Epigenetics
<b>Immunogen Species</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone NO.</b>	F4A2
<b>React Species</b>	Human,Mouse,Rat WB=1:500-2000,IHC-P=1:50-200,IHC-F=1:50-200,IF=1:50-200 (Paraffin sections need antigen repair)
<b>Applications</b>	not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Theoretical molecular weight</b>	61kDa
<b>Cellular localization</b>	cytoplasmic The cell membrane
<b>Form</b>	Liquid
<b>Concentration</b>	1mg/ml
<b>immunogen</b>	Recombinant human CAMK2 between 1-503 amino acids.
<b>Lsotype</b>	IgG1
<b>Purification</b>	affinity purified by Protein G



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<b>Buffer Solution</b>	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
<b>Storage</b>	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
<b>Attention</b>	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
<b>PubMed</b>	<a href="#">PubMed</a> The multifunctional CaMKII beta, or Ca <sup>2+</sup> /calmodulin-dependent protein kinase II, is a well known effector of calcium- and calmodulin- mediated functions. It is present in many tissues but is most abundant in the brain. CaMKII 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. Autophosphorylation plays an important role in the regulation of the kinase activity. CaMKII is required for synaptic plasticity, as in Long Term Potentiation (LTP), a cellular model for learning and memory.
<b>Product Detail</b>	<p><b>Function:</b> Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca(2+)/calmodulin-binding and autophosphorylation, and is involved in sarcoplasmic reticulum Ca(2+) transport in skeletal muscle and may function in dendritic spine and synapse formation and neuronal plasticity. In slow-twitch muscles, is involved in regulation of sarcoplasmic reticulum (SR) Ca(2+) transport and in fast-twitch muscle participates in the control of Ca(2+) release from the SR through phosphorylation of the ryanodine receptor-coupling factor triadin. In neurons, may participate in the promotion of dendritic spine and synapse formation and maintenance of synaptic plasticity which enables long-term potentiation (LTP) and hippocampus-dependent learning.</p> <p><b>Subunit:</b> CAMK2 is composed of 4 different chains: alpha (CAMK2A), beta (CAMK2B), gamma (CAMK2G), and delta (CAMK2D). The different isoforms assemble into homo- or heteromultimeric holoenzymes composed of 12 subunits with two hexameric rings stacked one on top of the other.</p> <p><b>Subcellular Location:</b> Sarcoplasmic reticulum membrane; Peripheral membrane protein; Cytoplasmic side (Probable).</p> <p><b>Tissue Specificity:</b> Expressed in skeletal muscle.</p> <p><b>Post-translational modifications:</b> Autophosphorylation of Thr-287 following activation by Ca(2+)/calmodulin.</p>

Phosphorylation of Thr-287 locks the kinase into an activated state.

**Similarity:**

Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily.

Contains 1 protein kinase domain.

**SWISS:**

Q13554

**Gene ID:**

816

**Database links:**

[Entrez Gene: 816](#) Human

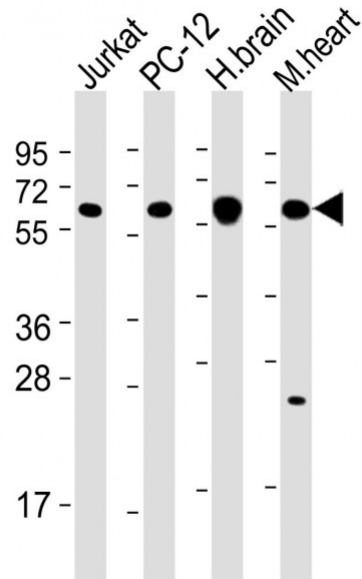
[Entrez Gene: 12323](#) Mouse

[Entrez Gene: 24245](#) Rat

[SwissProt: Q13554](#) Human

[SwissProt: P28652](#) Mouse

[SwissProt: P08413](#) Rat



### Product Picture

Sample:

Lane 1: Jurkat cell lysates

Lane 2: PC-12 cell lysates

Lane 3: Human brain tissue lysates

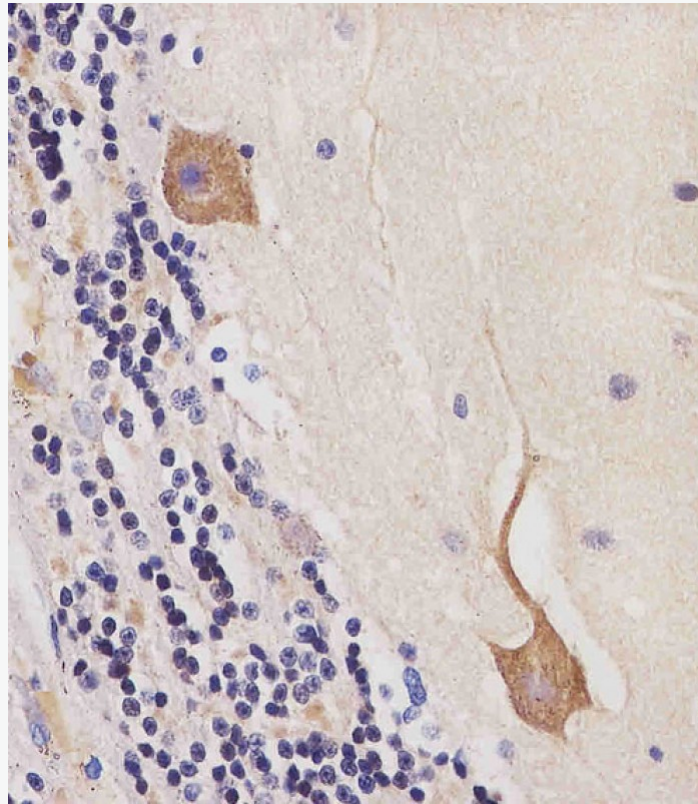
Lane 4: Mouse Heart tissue lysates

Primary: Anti-CAMK2 beta (SLM-51658M) at 1/2000 dilution

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

Predicted band size: 61 kD

Observed band size: 61 kD



Paraformaldehyde-fixed, paraffin embedded ( human cerebellum tissue sections ); 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 beta) Monoclonal Antibody, Unconjugated (SLM-51658M) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructions and DAB staining.