

## Anti-CAMK2 beta Antibody (C-term)

Catalog Number: M03964-1

### About CAMK2B

Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca(2+)/calmodulin-binding and autophosphorylation, and is involved in dendritic spine and synapse formation, neuronal plasticity and regulation of sarcoplasmic reticulum Ca(2+) transport in skeletal muscle. In neurons, plays an essential structural role in the reorganization of the actin cytoskeleton during plasticity by binding and bundling actin filaments in a kinase-independent manner. This structural function is required for correct targeting of CaMK2A, which acts downstream of NMDAR to promote dendritic spine and synapse formation and maintain synaptic plasticity which enables long-term potentiation (LTP) and hippocampus-dependent learning. In developing hippocampal neurons, promotes arborization of the dendritic tree and in mature neurons, promotes dendritic remodeling. Participates in the modulation of skeletal muscle function in response to exercise. 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 triadin, a ryanodine receptor-coupling factor, and phospholamban (PLN/PLB), an endogenous inhibitor of SERCA2A/ATP2A2.

### Overview

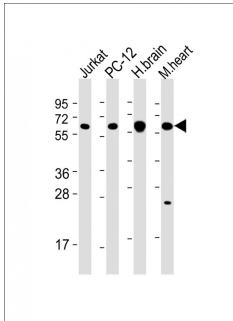
Product Name	Anti-CAMK2 beta Antibody (C-term)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-CAMK2 beta Antibody (C-term) (Catalog # M03964-1). Tested in WB, IHC-P application(s). This antibody reacts with Human, Mouse, Rat.
Application	IHC-P, WB
Clonality	Monoclonal 1050CT14.1.3
Formulation	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.
Storage Instructions	Maintain refrigerated at 2-8°C for up to 2 weeks. For long-term storage, store at -20°C in small aliquots to prevent freeze-thaw cycles.
Host	Mouse
Uniprot ID	Q13554

### Technical Details

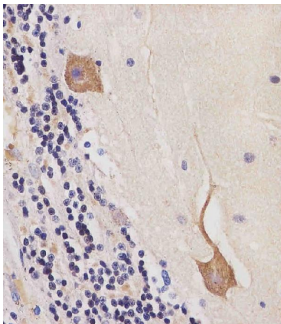
Immunogen	This CAMK2 beta antibody is generated from a mouse immunized with a recombinant protein between 1-503 amino acids from human CAMK2 beta.
Predicted Reactive Species	Bovine
Isotype	IgG1
Purification	This antibody is purified through a protein G column, followed by dialysis against PBS.
Suggested Dilutions	WB: 1:2000

IHC-P: 1:25

## Anti-CAMK2 beta Antibody (C-term) (M03964-1) Images



All lanes : Anti-CAMK2 beta Antibody (C-term) at 1:2000 dilution  
Lane 1: Jurkat whole cell lysate  
Lane 2: PC-12 whole cell lysate  
Lane 3: human brain lysate  
Lane 4: mouse heart lysate  
Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 60 kDa  
Blocking/Dilution buffer: 5% NFDM/TBST.



M03964-1 staining CAMK2 in human cerebellum tissue sections by Immunohistochemistry (IHC-P -paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

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