

CAMK2 beta Antibody (C-term)

Purified Mouse Monoclonal Antibody (Mab)

Catalog # AM8610b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q13554
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	monoclonal
Isotype	IgG1
Clone Names	1050CT14.1.3

Additional Information

Other Names	Calcium/calmodulin-dependent protein kinase type II subunit beta, CaM kinase II subunit beta, CaMK-II subunit beta, 2.7.11.17, CAMK2B, CAM2, CAMK2, CAMKB
Target/Specificity	This CAMK2 beta antibody is generated from a mouse immunized with a recombinant protein between 1-503 amino acids from human CAMK2 beta.
Dilution	WB~~1:2000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	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.
Precautions	CAMK2 beta Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Background

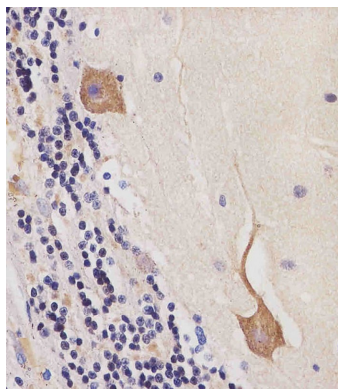
Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca(2+)/calmodulin-binding and autophosphorylation, and is involved in dendritic spine and synapse formation, neuronal plasticity and regulation of sarcoplasmic reticulum Ca(2+) transport in skeletal muscle. In neurons, plays 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.

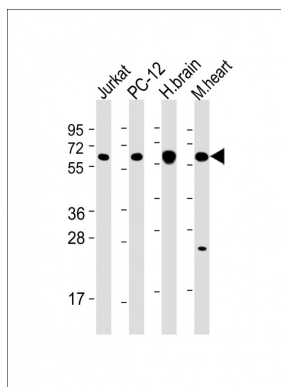
References

- Wang P., et al. FEBS Lett. 475:107-110(2000).
Leddy J.J., et al. Submitted (MAR-1995) to the EMBL/GenBank/DDBJ databases.
Li G.Y., et al. Submitted (DEC-1998) to the EMBL/GenBank/DDBJ databases.
Rochlitz H., et al. Diabetologia 43:465-473(2000).
Ota T., et al. Nat. Genet. 36:40-45(2004).

Images



AM8610b 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 hour at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.