10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Mouse Camk2b Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP14185c

Specification

Mouse Camk2b Antibody (Center) - Product Information

Application	**WB,E**
Primary Accession	P28652
Other Accession	P08413, Q13554, Q3MHJ9, NP_031621.3
Reactivity	**Mouse**
Predicted	**Bovine, Human, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**60461**
Antigen Region	**168-196**

Mouse Camk2b Antibody (Center) - Additional Information

Gene ID 12323

Other Names
Calcium/calmodulin-dependent protein kinase type II subunit beta, CaM kinase II subunit beta, CaMK-II subunit beta, Camk2b, Camk2d

Target/Specificity
This Mouse Camk2b antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 168-196 amino acids from the Central region of mouse Camk2b.

Dilution
WB~~1:1000

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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
Mouse Camk2b Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Camk2b Antibody (Center) - Protein Information

Name Camk2b

Synonyms Camk2d

Function 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. Also regulates the migration of developing neurons (PubMed:29100089). 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 (PubMed:21752990). In response to interferon-gamma (IFN-gamma) stimulation, catalyzes phosphorylation of STAT1, stimulating the JAK-STAT signaling pathway (By similarity). Phosphorylates reticulophagy regulator RETREG1 at 'Thr-134' under endoplasmic reticulum stress conditions which enhances RETREG1 oligomerization and its membrane scission and reticulophagy activity (By similarity).

Cellular Location
Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Sarcoplasmic reticulum membrane; Peripheral membrane protein; Cytoplasmic side. Synapse {ECO:0000250|UniProtKB:P08413}

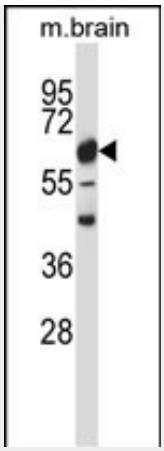
Mouse Camk2b Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Mouse Camk2b Antibody (Center) - Images

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Mouse Camk2b Antibody (Center) (Cat. #AP14185c) western blot analysis in mouse brain tissue lysates (35ug/lane).This demonstrates the Camk2b antibody detected the Camk2b protein (arrow).

Mouse Camk2b Antibody (Center) - Background

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 (By similarity).

Mouse Camk2b Antibody (Center) - References

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Jin, X.L., et al. Biol. Reprod. 82(2):459-468(2010)
van Woerden, G.M., et al. Nat. Neurosci. 12(7):823-825(2009)
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