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CaMKII delta Antibody

Rabbit mAb
Catalog # AP91268

Product Information

Application	WB, IHC
Primary Accession	Q13557
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	CAM kinase 2 delta; CAM kinase II delta; CaM kinase II delta subunit; CaM kinase II subunit delta; CAMK 2d; CaMK-II delta subunit; CAMK2D; CAMKI;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	56369

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human CaMKII delta
Description	CaM-kinase II (CAMK2) is a prominent kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

Name	CAMK2D
Synonyms	CAMKD
Function	Calcium/calmodulin-dependent protein kinase involved in the regulation of Ca(2+) homeostatis and excitation-contraction coupling (ECC) in heart by targeting ion channels, transporters and accessory proteins involved in Ca(2+) influx into the myocyte, Ca(2+) release from the sarcoplasmic reticulum (SR), SR Ca(2+) uptake and Na(+) and K(+) channel transport. Targets also transcription factors and signaling molecules to regulate heart function. In its activated form, is involved in the pathogenesis of dilated cardiomyopathy and heart failure. Contributes to cardiac decompensation and heart failure by regulating SR Ca(2+) release via direct phosphorylation of RYR2 Ca(2+) channel on 'Ser-2808'. In the nucleus, phosphorylates the MEF2 repressor HDAC4, promoting its nuclear export and binding to 14-3-3 protein, and expression of MEF2 and genes involved in the hypertrophic program (PubMed:17179159). Is essential for left ventricular remodeling responses to myocardial infarction. In pathological myocardial remodeling acts

downstream of the beta adrenergic receptor signaling cascade to regulate key proteins involved in ECC. Regulates Ca(2+) influx to myocytes by binding and phosphorylating the L-type Ca(2+) channel subunit beta-2 CACNB2. In addition to Ca(2+) channels, can target and regulate the cardiac sarcolemmal Na(+) channel Nav1.5/SCN5A and the K+ channel Kv4.3/KCND3, which contribute to arrhythmogenesis in heart failure. Phosphorylates phospholamban (PLN/PLB), an endogenous inhibitor of SERCA2A/ATP2A2, contributing to the enhancement of SR Ca(2+) uptake that may be important in frequency-dependent acceleration of relaxation (FDAR) and maintenance of contractile function during acidosis (PubMed:16690701). May participate in the modulation of skeletal muscle function in response to exercise, by regulating SR Ca(2+) transport through phosphorylation of PLN/PLB and triadin, a ryanodine receptor-coupling factor. In response to interferon-gamma (IFN-gamma) stimulation, catalyzes phosphorylation of STAT1, stimulating the JAK-STAT signaling pathway (By similarity).

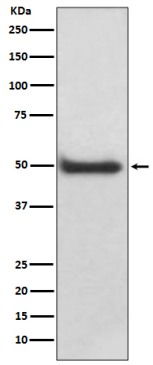
Cellular Location

Cell membrane, sarcolemma; Peripheral membrane protein; Cytoplasmic side. Sarcoplasmic reticulum membrane; Peripheral membrane protein; Cytoplasmic side

Tissue Location

Expressed in cardiac muscle and skeletal muscle. Isoform Delta 3, isoform Delta 2, isoform Delta 8 and isoform Delta 9 are expressed in cardiac muscle. Isoform Delta 11 is expressed in skeletal muscle.

Images



Western blot analysis of CaMKII delta expression in A431 cell lysate.

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