

**CaMKIIδ Polyclonal Antibody**  
**Catalog # AP73246****Specification**

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**CaMKIIδ Polyclonal Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	<a href="#">Q13557</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal

**CaMKIIδ Polyclonal Antibody - Additional Information****Gene ID** 817**Other Names**

CAMK2D; CAMKD; Calcium/calmodulin-dependent protein kinase type II subunit delta; CaM kinase II subunit delta; CaMK-II subunit delta

**Dilution**

WB~~Western Blot: 1/500 - 1/2000. IHC-p: 1:100-300 ELISA: 1/40000. Not yet tested in other applications.

IHC-P~~N/A

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**CaMKIIδ Polyclonal Antibody - Protein Information****Name** CAMK2D**Synonyms** CAMKD**Function**

Calcium/calmodulin-dependent protein kinase involved in the regulation of Ca(2+) homeostasis 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:<a href="http://www.uniprot.org/citations/17179159" target="\_blank">17179159</a>). 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  $\text{Ca}^{2+}$  influx to myocytes by binding and phosphorylating the L-type  $\text{Ca}^{2+}$  channel subunit beta-2 CACNB2. In addition to  $\text{Ca}^{2+}$  channels, can target and regulate the cardiac sarcolemmal  $\text{Na}^{+}$  channel Nav1.5/SCN5A and the  $\text{K}^{+}$  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  $\text{Ca}^{2+}$  uptake that may be important in frequency-dependent acceleration of relaxation (FDAR) and maintenance of contractile function during acidosis (PubMed:<a href="http://www.uniprot.org/citations/16690701" target="\_blank">16690701</a>). May participate in the modulation of skeletal muscle function in response to exercise, by regulating SR  $\text{Ca}^{2+}$  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

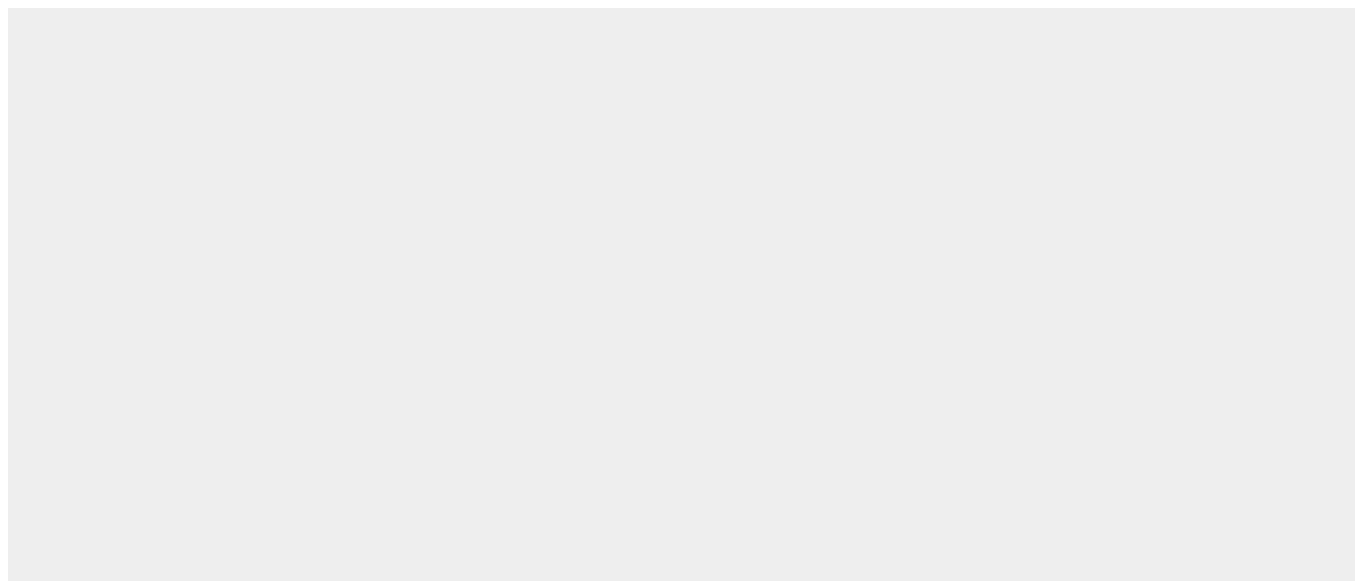
**Tissue Location**

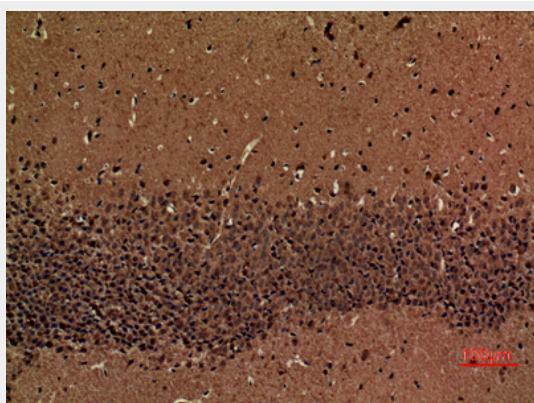
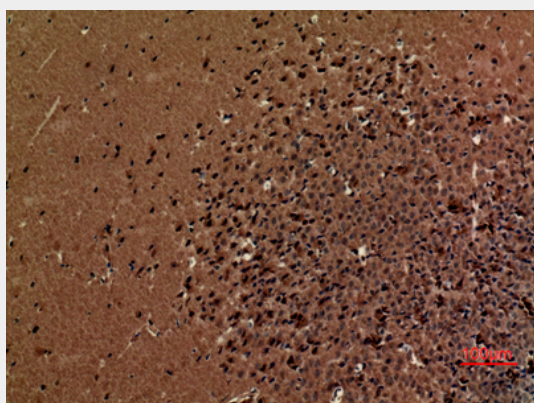
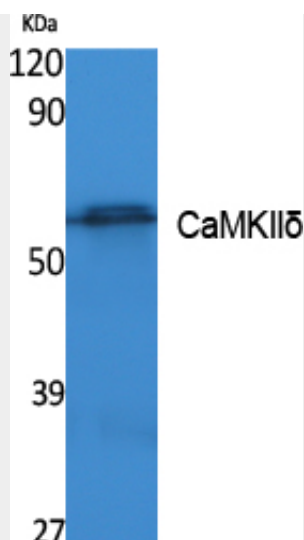
Expressed in cardiac muscle and skeletal muscle. Isoform Delta 3, isoform Delta 2, isoform Delta 8 and isoform Delta 9 are expressed in cardiac muscle. Isoform Delta 11 is expressed in skeletal muscle.

**CaMKIIδ Polyclonal Antibody - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**CaMKIIδ Polyclonal Antibody - Images**



### CaMKIIδ Polyclonal Antibody - Background

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decompensation and heart failure by regulating SR  $\text{Ca}^{2+}$  release via direct phosphorylation of RYR2  $\text{Ca}^{2+}$  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. 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  $\text{Ca}^{2+}$  influx to myocytes by binding and phosphorylating the L-type  $\text{Ca}^{2+}$  channel subunit beta-2 CACNB2. In addition to  $\text{Ca}^{2+}$  channels, can target and regulate the cardiac sarcolemmal  $\text{Na}^{+}$  channel Nav1.5/SCN5A and the  $\text{K}^{+}$  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  $\text{Ca}^{2+}$  uptake that may be important in frequency-dependent acceleration of relaxation (FDAR) and maintenance of contractile function during acidosis. May participate in the modulation of skeletal muscle function in response to exercise, by regulating SR  $\text{Ca}^{2+}$  transport through phosphorylation of PLN/PLB and triadin, a ryanodine receptor- coupling factor.