

CaMKII delta Rabbit mAb

Catalog No: #52186

Package Size: #52186-1 50ul #52186-2 100ul

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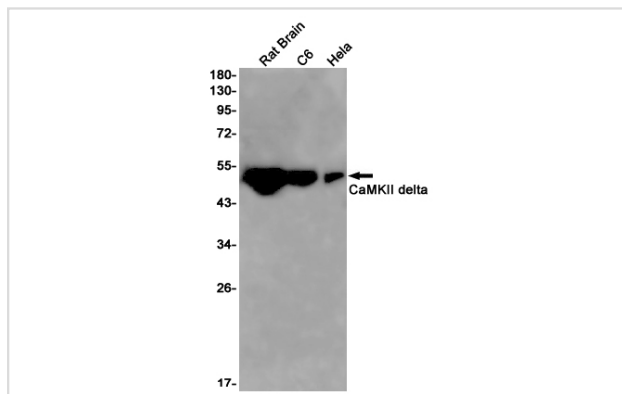
Description

Product Name	CaMKII delta Rabbit mAb
Host Species	Recombinant Rabbit
Clonality	Monoclonal antibody
Clone No.	S03-8A9
Isotype	Rabbit IgG
Purification	Affinity Purified
Applications	WB
Species Reactivity	Human,Mouse,Rat
Immunogen Description	A synthetic peptide of human CaMKII delta
Conjugates	Unconjugated
Modification	Unmodification
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;
Accession No.	Swiss-Prot:Q13557GeneID:817
Uniprot	Q13557
GeneID	817
Calculated MW	Calculated MW: 56 kDa; Observed MW: 56 kDa
Concentration	0.3 mg/ml
Formulation	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40% Glycerol, 0.01% Sodium azide and 0.05% BSA
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Application Details

WB: 1/1000

Images



Western blot detection of CaMKII delta in Rat Brain,C6,Hela cell lysates using CaMKII delta Rabbit mAb(1:1000 diluted).Predicted band size:56kDa.Observed band size:56kDa.

Background

Swiss-Prot Acc.Q13557.Calcium/calmodulin-dependent protein kinase involved in the regulation of Ca²⁺ homeostasis and excitation-contraction coupling (ECC) in heart by targeting ion channels, transporters and accessory proteins involved in Ca²⁺ influx into the myocyte, Ca²⁺ release from the sarcoplasmic reticulum (SR), SR Ca²⁺ 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 Ca²⁺ release via direct phosphorylation of RYR2 Ca²⁺ 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 Ca²⁺ influx to myocytes by binding and phosphorylating the L-type Ca²⁺ channel subunit beta-2 CACNB2. In addition to Ca²⁺ 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 Ca²⁺ 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 Ca²⁺ transport through phosphorylation of PLN/PLB and triadin, a ryanodine receptor-coupling factor.

Note: This product is for in vitro research use only