

## Product datasheet for **TP710320**

### Camk2d (NM\_001025438) Mouse Recombinant Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse calcium/calmodulin-dependent protein kinase II, delta (Camk2d), transcript variant 2, mutant(T287A), with C-terminal DDK tag, expressed in sf9, 20ug
Species:	Mouse
Expression Host:	Sf9
Expression cDNA Clone or AA Sequence:	A DNA sequence from TrueORF clone, MR207996, encoding Mouse CaMKII-dc(T287A)
Tag:	C-DDK
Predicted MW:	55.3 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	50 mM Tris-HCl, 100 mM glycine, pH 8.0, 10% glycerol
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	<a href="#">NP_001020609</a>
Locus ID:	108058
UniProt ID:	<a href="#">Q6PHZ2</a>
RefSeq Size:	5602
Cytogenetics:	3 G1
RefSeq ORF:	1500
Synonyms:	2810011D23Rik; 8030469K03Rik; CaMK II; [d]-CaMKII



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**Summary:**

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. 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. 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.[UniProtKB/Swiss-Prot Function]

**Product images:**