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DATA SHEET

Mouse Anti-CaMKII [MD431]: MC0670, MC0670RTU7

Intended Use: For Research Use Only

Description: Calcium/calmodulin-dependent protein kinase II (CaMKII) is a pivotal serine/threonine kinase that plays a crucial role in numerous cellular processes, including regulation of cell cycle, gene transcription, and synaptic plasticity, which is fundamental for learning and memory in the nervous system. CaMKII family is ubiquitously expressed and activated by calcium and calmodulin, making CaMKII essential for cellular signaling pathways that respond to calcium influx. By modulating these pathways, CaMKII influences critical functions such as neuronal development, muscle contraction, and immune responses.

Specifications:

Clone:	MD431
Source:	Mouse
Isotype:	IgG1k
Immunogen:	Mouse CaMKIIα aa 303-478
Reactivity:	Human, mouse, rat
Localization:	Cytoplasm
Formulation:	Purified antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3)
Storage:	Store at 2°- 8°C
Applications:	IHC, ELISA, IF, IP, WB

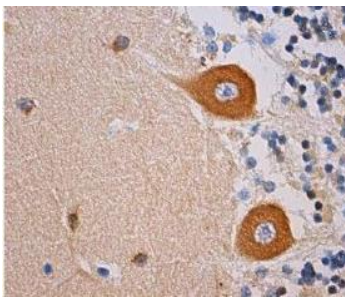
Package:

Description	Catalog No.	Size
CaMKII [MD431] Concentrated	MC0670	1 ml
CaMKII [MD431] Prediluted	MC0670RTU7	7 ml

IHC Procedure*:

Positive Control Tissue:	Stomach, cerebellum, duodenum or hippocampus tissue
Concentrated Dilution:	25-200
Pretreatment:	Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C
Incubation Time and Temp:	30-60 minutes at RT
Detection:	Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human cerebellum tissue stained with anti-CaMKII using DAB

References:

1. Effects of an Exercise Program Combining Aerobic and Resistance Training on Protein Expressions of Neurotrophic Factors in Obese Rats Injected with Beta-Amyloid. Lee, G. et al. 2022. Int J Environ Res Public Health. PMID: 35805580.
2. Titin and CK2α are New Intracellular Targets in Acute Insulin Application-Associated Benefits on Electrophysiological Parameters of Left Ventricular Cardiomyocytes From Insulin-Resistant Metabolic Syndrome Rats. Cardiovasc Drugs Ther. Aug;34(4):487-501, 2020. doi: 10.1007/s10557-020-06974-2.
3. Peimine inhibits the growth and motility of prostate cancer cells and induces apoptosis by disruption of intracellular calcium homeostasis through Ca2+ /CaMKII/JNK pathway. Hailin Tan, et al. J. Cell. Biochem. 2019. PMID: 31081133.

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