

Basic Information

Product Name	Anti-CaMKII Alpha/CAMK2A Antibody	
Gene Name	CAMK2A	
Source	Rabbit	
Isotype	IgG	
Species Reactivity	human, mouse, rat	
Tested Application	WB, IF, ICC/IF, FCM, ELISA	
Contents	500 ug/ml antibody with PBS , 0.02% NaN ₃ , 1 mg BSA and 50% glycerol.	
Immunogen	E.coli-derived human CaMKII alpha/CAMK2A recombinant protein (Position: M1-H478).	
concentration	500 ug/ml	
Purification	Immunogen affinity purified.	
Observed MW	54KD	
Dilution Ratios	Western blot(WB):	1:500-2000
	Immunocytochemistry/Immunofluorescence (ICC/IF):	1:50-400
	Immunofluorescence (IF) :	1:50-400
	Flow cytometry (FCM):	1-3 µg/1x10 ⁶ cells
	Flow cytometry (FCM):	1-3 µg/1x10 ⁶ cells
	(ELISA):	1:100-1000

Storage

12 months from date of receipt, -20°C as supplied. 6 months 2 to 8°C after reconstitution. Avoid repeated freezing and thawing.

Background Information

Calcium/calmodulin-dependent protein kinase type II subunit alpha (CaMKIIα), a.k.a. Ca²⁺/calmodulin-dependent protein kinase II alpha, is a protein kinase (i.e., an enzyme which phosphorylates proteins) that in humans is encoded by the CAMK2A gene. It is mapped to 5q32. The product of this gene belongs to the serine/threonine protein kinases family, and to the Ca(2+)/calmodulin-dependent protein kinases subfamily. Calcium signaling is crucial for several aspects of plasticity at glutamatergic synapses. This calcium calmodulin-dependent protein kinase is composed of four different chains: alpha, beta, gamma, and delta. The alpha chain encoded by this gene is required for hippocampal long-term potentiation (LTP) and spatial learning. In addition to its calcium-calmodulin (CaM)-dependent activity, this protein can undergo autophosphorylation, resulting in CaM-independent activity. Several transcript variants encoding distinct isoforms have been identified for this gene.

Reference

Anti-CaMKII Alpha/CAMK2A Antibody被引用在1文献中。

Selected Validation Data

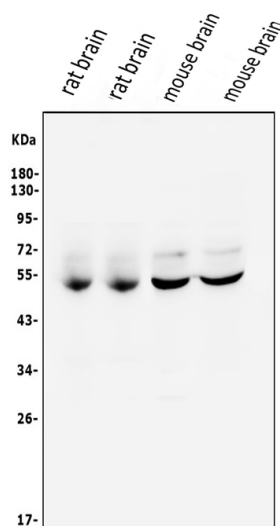


Figure 1. Western blot analysis of anti-CAMK2A antibody (A03241-2). The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: Rat brain tissue lysates, Lane 2: Rat brain tissue lysates, Lane 3: Mouse brain tissue lysates, Lane 4: Mouse brain tissue lysates. Use rabbit anti- CAMK2A 1:1000, probed with a goat anti-rabbit IgG-HRP secondary antibody. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002). A specific band was detected for CAMK2A at approximately 54KD. The expected band size for CAMK2A is at 54KD.

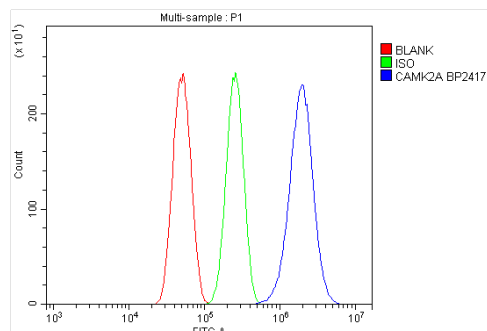


Figure 2. Flow cytometry analysis of U87 cell (1x10⁶). DyLight 488 conjugated goat anti-rabbit IgG (blue) was used as secondary antibody. Isotype control antibody (Green line) was rabbit IgG DyLight 488. Unlabelled sample (Red line).

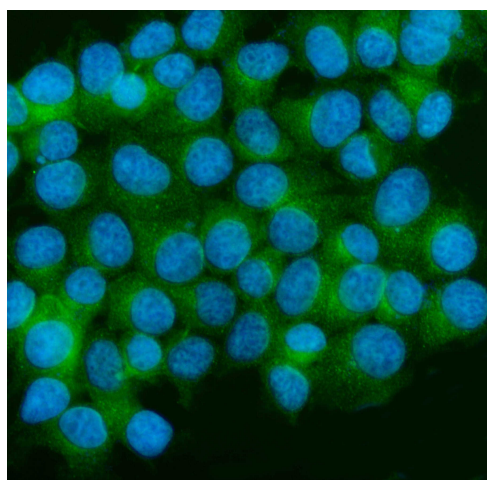


Figure 5 ICC analysis using anti- CAMK2A antibody (A03241-2). was detected in immersion fixed MCF-7 cell line. Cells were stained using the Dylight488-conjugated Anti-rabbit IgG Secondary Antibody (green) (Catalog # BA1127) and counterstained with DAPI (blue).

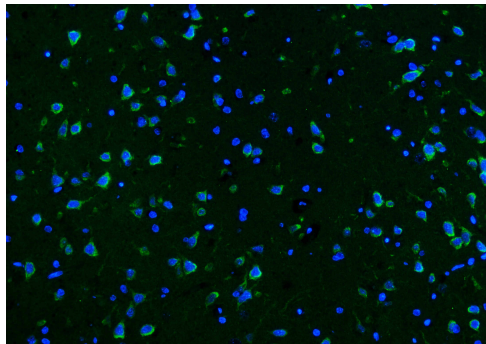


Figure 6. IF analysis using anti- CAMK2A antibody (A03241-2). detected in paraffin-embedded section of rat brain tissue. The tissue section were stained using the Dylight488-conjugated Anti-rabbit IgG Secondary Antibody (green) (Catalog # BA1127) and counterstained with DAPI (blue).