

## Anti-CAMK2 alpha Polyclonal Antibody 2

### Product Details

Ig Type:	IgG
Reactivity:	Human,Mouse,Rat
Molecular Weight:	Theoretical: 54 kDa. Actual: 54 kDa.
Purification:	Protein A purified

### Applications

#### 1. Sample:

Lane 1: Mouse Heart tissue lysates

Lane 2: Rat Heart tissue lysates

Primary: Anti-CaMK2 alpha (TMAB-00275) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 54 kDa

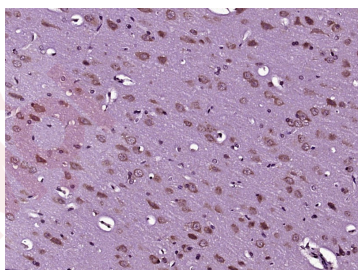
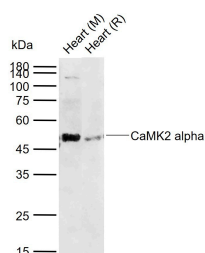
Observed band size: 50 kDa

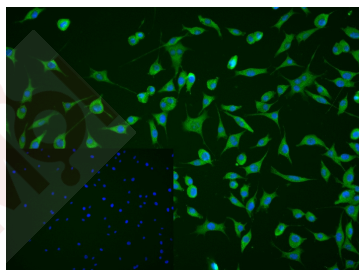
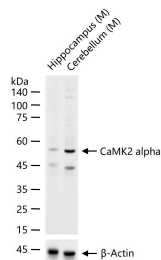
#### Verified Activity:

2. Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (CaMK2 alpha) Polyclonal Antibody, Unconjugated (TMAB-00275) at 1:400 overnight at 4°C, followed by operating according to SP Kit (Rabbit) instructions and DAB staining.

3. 25 µg total protein per Lane of various lysates probed with CaMK2 alpha polyclonal antibody, unconjugated (TMAB-00275) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at RT for 60 min.

4. 4% Paraformaldehyde-fixed SH-SY5Y (H) cell; Triton X-100 at RT for 20 min; Antibody incubation with (CaMK2 alpha) polyclonal Antibody, unconjugated (TMAB-00275) 1:100, 90 min at 37°C; followed by conjugated Goat Anti-Rabbit IgG antibody (green) at 37°C for 90 min, DAPI (blue) was used to stain the cell nucleus. PBS instead of the primary antibody was used as the blank control.





Application: ICC/IF,IF,IHC-Fr,IHC-P,WB

Recommended ICC/IF=1:100-500; IF=1:100-500; IHC-Fr=1:100-500; IHC-P=1:100-500; WB=1:500-2000

### Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

### Antigen Details

Immunogen: KLH conjugated synthetic peptide: human CaMK2 alpha

Antigen Species: Human

Gene ID: 815

Uniprot ID: Q13554

Synonyms: CAMK2α;CaMK 2a;alpha CaMKII;CaM kinase II beta subunit;Calcium/Calmodulin Dependent Protein Kinase II G;CaMKII;CaM kinase II subunit alpha;KCC2A;CAMKA;CAMKB;CAM2; Calcium/calmodulin-dependent protein kinase(CaM kinase) II alpha;Calcium calmodulin dependent protein kinase CaM kinase II alpha;CAMK2 α;Calcium/calmodulin-dependent protein kinase type II subunit alpha;CaM kinase II delta chain;CAMK2A;CaM kinase II alpha chain;CaM kinase II alpha subunit;CaM kinase II beta chain;CaMK II delta subunit;CaMK II beta subunit;Calcium/calmodulin dependent protein kinase II alpha;Calcium/calmodulin-dependent protein kinase type IIA;CaMKII alpha;Calcium calmodulin dependent protein kinase II;Calcium calmodulin dependent protein kinase II alpha-B subunit;CAMK2B;CaMK-II subunit alpha;CaM kinase II delta subunit;CaMK II alpha subunit;CAMK2D

Biology Area: Calmodulin / CaMK,Hypoxia,Hypertrophy,Response to hypoxia

### Research Background

The product of this gene belongs to the serine/threonine protein kinase family and to the Ca(2+)/calmodulin-dependent protein kinase subfamily. Calcium signaling is crucial for several aspects of plasticity at glutamatergic synapses. In mammalian cells, the enzyme is composed of four different chains: alpha, beta, gamma, and delta. The product of this gene is a beta chain. It is possible that distinct isoforms of this chain have different cellular localizations and interact differently with calmodulin. Eight transcript variants encoding eight distinct isoforms have been identified for this gene. [provided by RefSeq, Jul 2008].

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