Data Sheet (Cat.No.TMAC-00543)

Anti-CaMK2 Antibody (2O871)

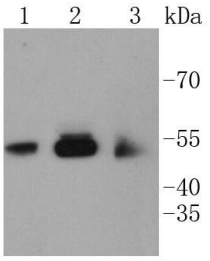
Product Details

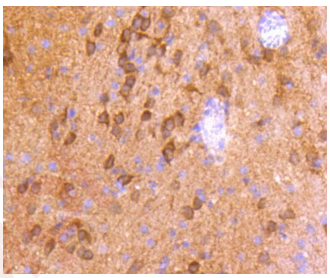
Ig Type:	IgG
Reactivity:	Human,Mouse,Rat
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 54 kDa.
Clone:	2O871
Purification:	ProA affinity purified

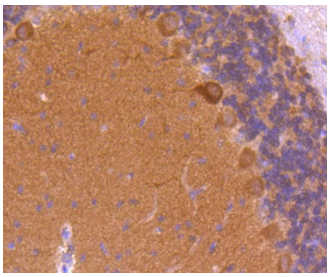
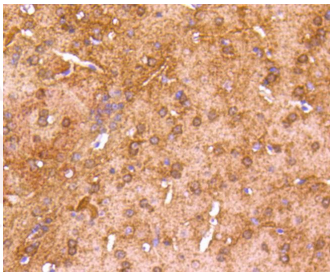
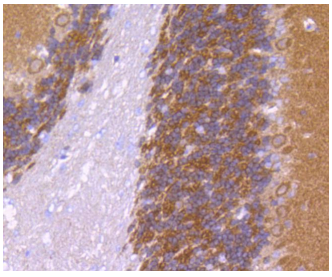
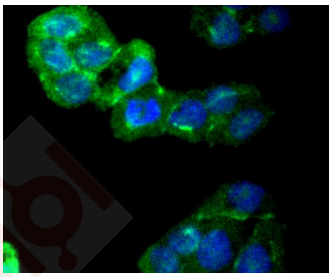
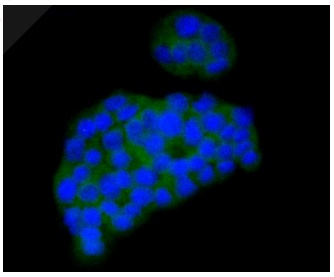
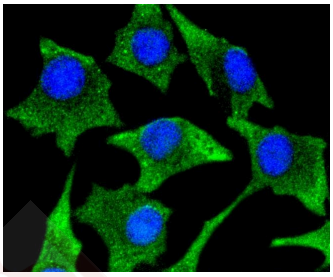
Applications

Verified Activity:

1. Western blot analysis of CaMK II on different lysates using anti-CaMK II antibody at 1/1,000 dilution. Positive control: Lane 1: SH-SY-5Y, Lane 2: PC-12, Lane 3: SHG-44.
2. Immunohistochemical analysis of paraffin-embedded rat brain tissue using anti-CaMK II antibody. Counter stained with hematoxylin.
3. Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue using anti-CaMK II antibody. Counter stained with hematoxylin.
4. Immunohistochemical analysis of paraffin-embedded mouse brain tissue using anti-CaMK II antibody. Counter stained with hematoxylin.
5. Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue using anti-CaMK II antibody. Counter stained with hematoxylin.
6. ICC staining CaMK II in Hela cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.
7. ICC staining CaMK II in PC-12 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.
8. ICC staining CaMK II in SHG-44 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.





Application: ICC/IF,IHC,WB

Recommended WB: 1:1000-2000; IHC: 1:50-200; ICC/IF: 1:50-200

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: Recombinant Protein

Uniprot ID: Q13554

Synonyms: CaM kinase II beta;CAMK2D;KCC2A_HUMAN;CAMK2G;Calcium/calmodulin dependent protein kinase II gamma;Calcium/calmodulin dependent protein kinase II beta;CAMK 2;CAMK2A; Calcium/calmodulin dependent protein kinase II delta;Calcium/calmodulin-dependent protein kinase type II subunit alpha;CaM kinase II delta;CaM kinase II subunit alpha;CaM kinase II; CAMK2B;CaMK-II subunit alpha;CaM kinase II alpha;CAMKA;CaM kinase II gamma; Calcium/calmodulin dependent protein kinase II alpha

Research Background

The Ca2+/calmodulin-dependent protein kinases (CaM kinases) comprise a structurally related subfamily of serine/threonine kinases which include CaMKI, CaMKII and CaMKIV. CaMKII is a ubiquitously expressed serine/threonine protein kinase that is activated by Ca2+and calmodulin (CaM) and has been implicated in regulation of the cell cycle and transcription. There are four CaMKII isozymes designated α, β, γ and δ, which may or may not be co-expressed in the same tissue type. CaMKIV is stimulated by Ca2+ and CaM but also requires phosphorylation by a CaMK for full activation. Stimulation of the T cell receptor CD3 signaling complex with an CD3 monoclonal antibody leads to a 10-40 fold increase in CaMKIV activity. An additional kinase, CaMKK, functions to activate CaMKI through the specific phosphorylation of the regulatory Threonine residue at position 177.