

## Rabbit CaMK2 Polyclonal Antibody | anti-CAMK2A antibody

Phospho-CaMK2 (Thr286) Antibody

| CATALOG # | HOST   | REACTIVITY        | APPLICATIONS                                                                       |
|-----------|--------|-------------------|------------------------------------------------------------------------------------|
| AAA321781 | Rabbit | Human, Mouse, Rat | ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot |

### PRODUCT SYNONYMS

CaMK2; Polyclonal Antibody; Phospho-CaMK2 (Thr286) Antibody; Alpha CaMKII; Calcium calmodulin dependent protein kinase II; Calcium/calmodulin dependent protein kinase II alpha B subunit; Calcium/calmodulin dependent protein kinase type II alpha chain; Calcium/calmodulin-dependent protein kinase (CaM kinase) II alpha; Calcium/calmodulin-dependent protein kinase II alpha; Calcium/calmodulin-dependent protein kinase II-alpha; Calcium/calmodulin-dependent protein kinase type II subunit alpha; Calcium/calmodulin-dependent protein kinase type IIA; CaM kinase II alpha chain; CaM kinase II alpha subunit; CaM kinase II subunit alpha; CaMK II alpha subunit; CaMK-II subunit alpha; Camk2a; CAMKA; CaMKII; CaMKIINalpha; EC 2.7.11.17; KCC2A\_HUMAN; KIAA0968; MGC123320; MGC139375; MGC155201; mKIAA0968; PK2CDD; PKCCD; R74975; zgc:112538; zgc:123320; Calcium/calmodulin dependent protein kinase 2 delta; Calcium/calmodulin dependent protein kinase II delta; calcium/calmodulin-dependent protein kinase (CaM kinase) II delta; calcium/calmodulin-dependent protein kinase type II delta chain; Calcium/calmodulin-dependent protein kinase type II subunit delta; CAM kinase 2 delta; CAM kinase II delta; CaM kinase II delta subunit; CaM kinase II subunit delta; CaM-kinase II delta chain; CAMK 2d; CaMK-II delta subunit; CaMK-II subunit delta; CAMK2D; CAMKD; CAMKI; KCC2D\_HUMAN; RATCAMKI; anti-CAMK2A antibody

### PRODUCT SPECIFICATIONS

|                                                  |                                                                                                                                        |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Host                                             | Rabbit                                                                                                                                 |
| Reactivity                                       | Human, Mouse, Rat                                                                                                                      |
| Clonality                                        | Polyclonal                                                                                                                             |
| Isotype                                          | IgG                                                                                                                                    |
| Specificity                                      | Phospho-CaMK2 (Thr286) antibody detects endogenous levels of CaMK2 only when phosphorylated at Threonine 286                           |
| Purity/Purification                              | From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns. |
| Form/Format                                      | Liquid<br>Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.                                          |
| Concentration                                    | 1mg/ml (varies by lot)                                                                                                                 |
| Sequence Length                                  | 478                                                                                                                                    |
| Applicable Applications for anti-CAMK2A antibody | ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)                               |
| Immunogen                                        | A synthesized peptide derived from human CaMK2 around the phosphorylation site of Threonine 286                                        |
| Subcellular Location                             | Cell Junction > Synapse > Presynaptic Cell Membrane. Cell Junction > Synapse. Postsynaptic Lipid Rafts.                                |
| Predicted Cross Reactivity                       | <b>Zebrafish, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus</b>                                                                  |
| Similarity                                       | Zebrafish (88%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (88%)                   |
| Conjugation                                      | Unconjugated                                                                                                                           |
| Epitope                                          | Phospho Thr286                                                                                                                         |
| Preparation and Storage                          | Store at -20 degree C. Stable for 12 months from date of receipt.                                                                      |

IMAGES



IF (Immunofluorescence)

AAA321781 staining MKN-45 cells treated with Forskolin 30  $\mu$ M, 20 min by ICC/IF. Cells were fixed with PFA and permeabilized in 0.1% saponin prior to blocking in 10% serum for 45 minutes at 37 degree C. The primary antibody was diluted 1/400 and incubated with the sample for 1 hour at 37 degree C. A Alexa Fluor 594 conjugated goat polyclonal to rabbit IgG (H+L), diluted 1/600 was used as secondary antibody.



IHC (Immunohistochemistry)

AAA321781 at 1/100 staining human kidney carcinoma tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



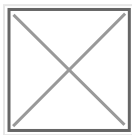
WB (Western Blot)

Western blot analysis of CaMK2 phosphorylation expression in K562 whole cell lysates, The lane on the left is treated with the antigen-specific peptide.



WB (Western Blot)

Western blot analysis of Phospho-CaMK2 (Thr286) expression in various lysates



IF (Immunofluorescence)

AAA321781 staining NIH-3T3 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

ADDITIONAL INFORMATION

|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-CAMK2A antibody | <p>Description: CaMK2-delta a protein kinase of the CAMK2 family. A prominent kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release. Member of the NMDAR signaling complex in excitatory synapses that may regulate NMDAR-dependent potentiation of the AMPAR and synaptic plasticity.</p> <p>Function: CaM-kinase II (CAMK2) is a prominent kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release. Member of the NMDAR signaling complex in excitatory synapses it may regulate NMDAR-dependent potentiation of the AMPAR and synaptic plasticity (By similarity). Phosphorylates transcription factor FOXO3 on 'Ser-298' (PubMed:23805378). Activates FOXO3 transcriptional activity (By similarity).</p> <p>Subunit Structure: CAMK2 is composed of four different chains: alpha, beta, gamma, and delta. The different isoforms assemble into homo-or heteromultimeric holoenzymes composed of 8 to 12 subunits. Interacts with BAALC, MPDZ, SYN1, CAMK2N2 and SYNGAP1. Interacts with SYNPO2 (By similarity).</p> <p>Similarity: Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily.</p> |
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NCBI AND UNIPROT INFORMATION

|                           |                                                                             |
|---------------------------|-----------------------------------------------------------------------------|
| NCBI GI #                 | 25952118                                                                    |
| NCBI GeneID               | 815                                                                         |
| NCBI Accession #          | NP_741960.1                                                                 |
| NCBI GenBank Nucleotide # | NM_171825.2                                                                 |
| UniProt Accession #       | Q9UQM7; Q9UL21; Q9Y2H4; Q9Y352                                              |
| Molecular Weight          | Observed: 50 kDa<br>Predicted: 55 kDa                                       |
| NCBI Official Full Name   | calcium/calmodulin-dependent protein kinase type II subunit alpha isoform 2 |

|                                  |                                                                     |
|----------------------------------|---------------------------------------------------------------------|
| NCBI Official Synonym Full Names | calcium/calmodulin dependent protein kinase II alpha                |
| NCBI Official Symbol             | CAMK2A                                                              |
| NCBI Official Synonym Symbols    | CAMKA; MRD53; MRT63; CaMKIINalpha                                   |
| NCBI Protein Information         | calcium/calmodulin-dependent protein kinase type II subunit alpha   |
| UniProt Protein Name             | Calcium/calmodulin-dependent protein kinase type II subunit alpha   |
| UniProt Gene Name                | <b>CAMK2A</b>                                                       |
| UniProt Synonym Gene Names       | CAMKA; KIAA0968; CaM kinase II subunit alpha; CaMK-II subunit alpha |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/camk2-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/321781>