

Datasheet for ABIN372594

anti-CAMK2A antibody (pThr286)[Go to Product page](#)**1** Image**7** Publications

Overview

Quantity:	0.1 mL
Target:	CAMK2A
Binding Specificity:	pThr286
Reactivity:	Human, Mouse, Rat, Xenopus laevis
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This CAMK2A antibody is un-conjugated
Application:	Western Blotting (WB)

Product Details

Immunogen:	Phosphopeptide corresponding to amino acid residues surrounding the phospho-Thr286 found in rat brain CaM Kinase II.
Isotype:	IgG
Specificity:	Specific for the ~50k Alpha-CaM Kinase II and the ~60k Beta-CaM Kinase II proteins phosphorylated at Thr286. Immunolabeling is blocked by the lambda-phosphatase treatment.
Cross-Reactivity (Details):	Species reactivity (expected): Human, Mouse and Xenopus. Species reactivity (tested): Rat.
Purification:	Sequential Chromatography on phospho- and dephosphopeptide affinity columns.

Target Details

Target:	CAMK2A
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Target Details

Alternative Name:	CAMK2A (CAMK2A Products)
Background:	Ca²⁺/calmodulin-dependent protein kinase II (CaM Kinase II) is a multi-functional calcium and calmodulin-dependent protein kinase that mediates cellular responses to a wide variety of intercellular signals (Kennedy, 1998, Schulman and Hanson, 1993). CaM Kinase II has been shown to regulate diverse cellular functions including synaptic plasticity, neurotransmitter synthesis and release, gene expression, ion channel function, carbohydrate metabolism, cytoskeletal function, and Ca²⁺-homeostasis (Gleason et al., 2003, Soderling, 2000, Hudmon and Schulman, 2002). Phosphorylation of Thr286 on the kinase produces an autonomously active form of CaM Kinase II (Meng et al., 2003, Picciotto et al., 1993). Autophosphorylation of Thr305 inhibits the activity CaM Kinase II. Phosphorylation at this site appears to reduce the association of CaM Kinase II with the PSD and reduce LTP and learning (Elgersma et al., 2002). Synonyms: CAMK2A, CAMK2B, CAMKA, CaM kinase II subunit alpha, CaM kinase II subunit beta, CaM-kinase II alpha chain, CaM-kinase II beta chain, CaMK-II subunit alpha, CaMK-II subunit beta, Calcium/calmodulin-dependent protein kinase type II, KIAA0968
Gene ID:	815
NCBI Accession:	NP_741960
UniProt:	Q9UQM7
Pathways:	WNT Signaling , Interferon-gamma Pathway , Myometrial Relaxation and Contraction

Application Details

Application Notes:	Western Blot: 1/1000. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
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Restrictions:	For Research Use only
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Handling

Format:	Liquid
Buffer:	10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/mL BSA and 50 % Glycerol.
Handling Advice:	Avoid repeated freezing and thawing.
Storage:	-20 °C
Storage Comment:	Store the antibody undiluted (in aliquots) at -20 °C.

Publications

- Product cited in:
- Magupalli, Mochida, Yan, Jiang, Westenbroek, Nairn, Scheuer, Catterall: "Ca²⁺-independent activation of Ca²⁺/calmodulin-dependent protein kinase II bound to the C-terminal domain of CaV2.1 calcium channels." in: **The Journal of biological chemistry**, Vol. 288, Issue 7, pp. 4637-48, (2013) ([PubMed](#)).
- Kothmann, Trexler, Whitaker, Li, Massey, OBrien: "Nonsynaptic NMDA receptors mediate activity-dependent plasticity of gap junctional coupling in the All amacrine cell network." in: **The Journal of neuroscience : the official journal of the Society for Neuroscience**, Vol. 32, Issue 20, pp. 6747-59, (2012) ([PubMed](#)).
- Coultrap, Buard, Kulbe, DellAcqua, Bayer: "CaMKII autonomy is substrate-dependent and further stimulated by Ca²⁺/calmodulin." in: **The Journal of biological chemistry**, Vol. 285, Issue 23, pp. 17930-7, (2010) ([PubMed](#)).
- Vest, OLeary, Coultrap, Kindy, Bayer: "Effective post-insult neuroprotection by a novel Ca(2+)/calmodulin-dependent protein kinase II (CaMKII) inhibitor." in: **The Journal of biological chemistry**, Vol. 285, Issue 27, pp. 20675-82, (2010) ([PubMed](#)).
- Sun, Milovanovic, Zhao, Wolf: "Acute and chronic dopamine receptor stimulation modulates AMPA receptor trafficking in nucleus accumbens neurons cocultured with prefrontal cortex neurons." in: **The Journal of neuroscience : the official journal of the Society for Neuroscience**, Vol. 28, Issue 16, pp. 4216-30, (2008) ([PubMed](#)).
- There are more publications referencing this product on: [Product page](#)

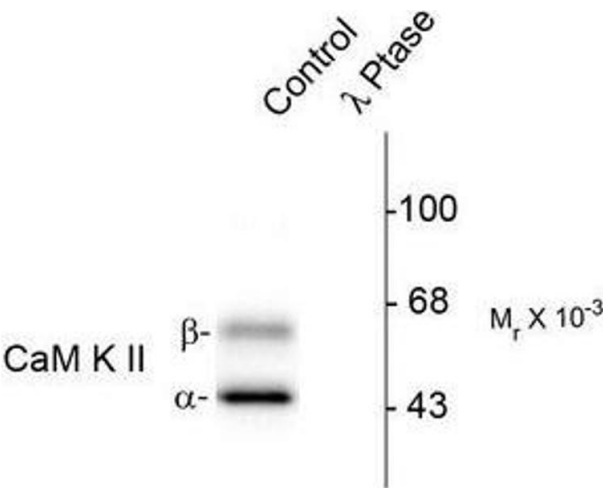


Image 1.