

Rabbit CaMK2 beta/gamma/delta Polyclonal Antibody | anti-CAMK2B antibody

Phospho-CaMK2 beta/gamma/delta (Thr287) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321724	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

CaMK2 beta/gamma/delta; Polyclonal Antibody; Phospho-CaMK2 beta/gamma/delta (Thr287) Antibody; Calcium/calmodulin-dependent protein kinase type II subunit alpha; Calcium/calmodulin-dependent protein kinase type II subunit delta; CaM kinase II subunit alpha; CaM kinase II subunit delta; CAM2; CaMK-II subunit alpha; CaMK-II subunit delta; CAMK2A; CAMK2B; CAMKA; CAMKB; CAMKD; CaMKII alpha; KIAA0968; CaM kinase II; CaM kinase II gamma chain; CaM kinase II subunit gamma; CAMK; CAMK II; CaMK II subunit gamma; CAMK2G; CAMKG; CAMKII; 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; CAM kinase 2 delta; CAM kinase II delta; CaM kinase II delta subunit; CaM-kinase II delta chain; CAMK 2d; CaMK-II delta subunit; CAMK2D; CAMKI; KCC2D_HUMAN; RATCAMKI; anti-CAMK2B antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-CaMK2-beta/gamma/delta (Thr287) antibody detects endogenous levels of CaMK2-beta/gamma/delta only when phosphorylated at Threonine 287
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	666
Applicable Applications for anti-CAMK2B antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human CaMK2-beta/gamma/delta around the phosphorylation site of Threonine 287
Subcellular Location	Cell Junction > Synapse > Presynaptic Cell Membrane. Cell Junction > Synapse. Postsynaptic Lipid Rafts.
Tissue Specificity	Widely expressed. Expressed in adult and fetal brain. Expression is slightly lower in fetal brain. Expressed in skeletal muscle.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Rabbit, Xenopus
Similarity	Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Xenopus (100%)
Conjugation	Unconjugated
Epitope	Phospho Thr287
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemistry)
AAA321724 at 1/100 staining Mouse muscle tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample 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-beta/gamma/delta phosphorylation expression in Rat brain tissue lysates, The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)
AAA321724 at 1/100 staining human brain tissues 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 45 degree C



WB (Western Blot)
Western blot analysis of Phospho-CaMK2 beta/gamma/delta (Thr287) Antibody expression in rat brain, mouse brain and HepG2 cell/tissue lysates.

ADDITIONAL INFORMATION

Related Product Information for anti-CAMK2B antibody

Description: 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.

Function: Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca2+/calmodulin-binding and autophosphorylation, and is involved in dendritic spine and synapse formation, neuronal plasticity and regulation of sarcoplasmic reticulum Ca2+ transport in skeletal muscle. In neurons, plays an essential structural role in the reorganization of the actin cytoskeleton during plasticity by binding and bundling actin filaments in a kinase-independent manner. This structural function is required for correct targeting of CaMK2A, which acts downstream of NMDAR to promote dendritic spine and synapse formation and maintain synaptic plasticity which enables long-term potentiation (LTP) and hippocampus-dependent learning. In developing hippocampal neurons, promotes arborization of the dendritic tree and in mature neurons, promotes dendritic remodeling. Participates in the modulation of skeletal muscle function in response to exercise. In slow-twitch muscles, is involved in regulation of sarcoplasmic reticulum (SR) Ca2+ transport and in fast-twitch muscle participates in the control of Ca2+ release from the SR through phosphorylation of triadin, a ryanodine receptor-coupling factor, and phospholamban (PLN/PLB), an endogenous inhibitor of SERCA2A/ATP2A2.

Subunit Structure: CAMK2 is composed of 4 different chains: alpha (CAMK2A), beta (CAMK2B), gamma (CAMK2G), and delta (CAMK2D). The different isoforms assemble into homo-or heteromultimeric holoenzymes composed of 12 subunits with two hexameric rings stacked one on top of the other (PubMed:14722083, Ref. 19). Interacts with SYNGAP1 and CAMK2N2 (By similarity). Interacts with MPDZ (PubMed:15312654). Interacts with FOXO3 (By similarity). Interacts (when in a kinase inactive state not associated with calmodulin) with ARC; leading to target ARC to inactive synapses (By similarity).

Post-translational Modifications: Autophosphorylation of Thr-287 following activation by Ca2+/calmodulin. Phosphorylation of Thr-287 locks the kinase into an activated state.

Similarity: The CAMK2 protein kinases contain a unique C-terminal subunit association domain responsible for oligomerization. Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	26051204
NCBI GeneID	816
NCBI Accession #	NP_001211.3
NCBI GenBank Nucleotide #	NM_001220.4
UniProt Accession #	Q13554; O95437; O95438; O95599; Q9UGH7; A4D2K0; A4D2K1; A4D2K2; A4D2K3; A4D2K4; A4D2K5; A4D2K6
Molecular Weight	Observed: 50; 65 kDa Predicted: 73 kDa

NCBI Official Full Name	calcium/calmodulin-dependent protein kinase type II subunit beta isoform 1
NCBI Official Synonym Full Names	calcium/calmodulin dependent protein kinase II beta
NCBI Official Symbol	CAMK2B
NCBI Official Synonym Symbols	CAM2; CAMK2; CAMKB; MRD54
NCBI Protein Information	calcium/calmodulin-dependent protein kinase type II subunit beta
UniProt Protein Name	Calcium/calmodulin-dependent protein kinase type II subunit beta
UniProt Gene Name	CAMK2B
UniProt Synonym Gene Names	CAM2; CAMK2; CAMKB; CaM kinase II subunit beta; CaMK-II subunit beta

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-beta-gamma-delta-antibody-immunohistochemistry-western-blot-elisa/321724>