Anti-KCC2B antibody

Description	Unconjugated Rabbit polyclonal to KCC2B

Model	STJ191965
Host	Rabbit
Reactivity	Human
Applications	ELISA, WB
Gene ID	816
Gene Symbol	CAMK2B
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	KCC2B Polyclonal Antibody detects endogenous levels of protein.
Tissue Specificity	Widely expressed. Expressed in adult and fetal brain. Expression is slightly lower in fetal brain. Expressed in skeletal muscle.
Purification	KCC2B antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Calcium/calmodulin-dependent protein kinase type II subunit beta CaM kinase II subunit beta CaMK-II subunit beta
Molecular Weight	73 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG

Formulation	Liquid form in PBS containing 50% glycerol,and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:1461OMIM:607707
Alternative Names	Calcium/calmodulin-dependent protein kinase type II subunit beta CaM kinase II subunit beta CaMK-II subunit beta
Function	Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca(2+)/calmodulin-binding and autophosphorylation, and is involved in dendritic spine and synapse formation, neuronal plasticity and regulation of sarcoplasmic reticulum Ca(2+) 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) Ca(2+) transport and in fast-twitch muscle participates in the control of Ca(2+) release from the SR through phosphorylation of triadin, a ryanodine receptor-coupling factor, and phospholamban (PLN/PLB), an endogenous inhibitor of SERCA2A/ATP2A2.
Sequence and Domain Family	The CAMK2 protein kinases contain a unique C-terminal subunit association domain responsible for oligomerization.
Cellular Localization	Cytoplasm, cytoskeleton Cytoplasm, cytoskeleton, microtubule organizing center, centrosome Sarcoplasmic reticulum membrane. In slow-twitch muscle, evenly distributed between longitudinal SR and junctional SR.
Post-translational Modifications	Autophosphorylation of Thr-287 following activation by Ca(2+)/calmodulin. Phosphorylation of Thr-287 locks the kinase into an activated state.