

Product datasheet for **TA328764**

Cacnb1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)DRATGEHASVHEYPGE, corresponding to amino acid residues 456-471 of rat CaV α 1. Intracellular, adjacent to the C-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN ₃ .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	calcium voltage-gated channel auxiliary subunit beta 1
Database Link:	NP_059042 Entrez Gene 12295 Mouse Entrez Gene 50688 Rat P54283

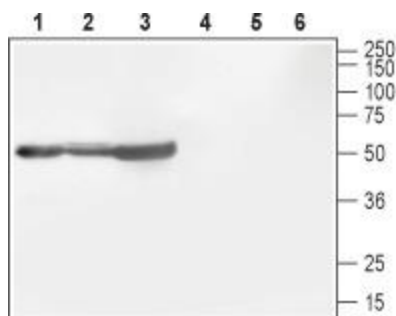
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Background:

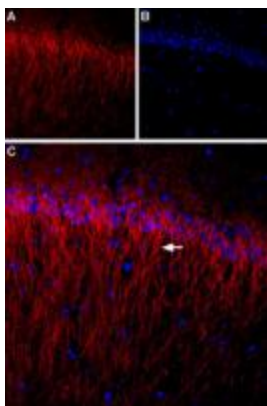
Voltage-gated Ca^{2+} (CaV) channels are ubiquitously expressed and function as Ca^{2+} conducting pores in the plasma membrane¹. Based on their electrophysiological and pharmacological properties, CaV channels have traditionally been classified into L, T, N, P, Q, and R types. L-type Ca^{2+} channels are heteromultimers composed of four independently encoded proteins, the pore-forming α_1 subunit, which triggers Ca^{2+} flow across the membrane, and the subunits $\alpha_2\delta$, β , and γ . CaV β subunits play critical roles in membrane trafficking of the channel complex and regulation of voltage-dependent gating. The CaV β subunit binds to the endoplasmic reticulum (ER) retention signal in the I-II loop of the α_1 -subunit, which allows channels to traffic to the surface membrane⁴. Furthermore, CaV β subunits not only allow for membrane trafficking of the channel complex, they also can play a role in determining the subcellular localization of channels on the surface membrane. There are four distinct CaV β subunits CaV β 1, CaV β 2, CaV β 3 and CaV β 4. Three splice variants exist for the β 1 subunit: β 1a, β 1b and β 1c. β 1a is known to be expressed in skeletal muscle and brain, but not in smooth muscle or heart. β 1a appears to be important for the functional expression of the α_1 subunit in skeletal muscle. β 1b was identified by cloning in rat brain, heart and hippocampus, and differs from β 1a by having a deletion of ~50 amino acids at residue 209, and having a 120-residue C-terminal elongation. β 1c was cloned from human heart and hippocampus and has the same deletion as β 1b, but lacks the C-terminal extension.

Synonyms:

CAB1; CACNLB1; CCHLB1; MGC41896

Product images:


Western blot analysis of rat brain (lanes 1 and 4), mouse brain (lanes 2 and 5) and rat cortex (lane 3 and 6): 1-3. Anti-CaV β 1 antibody, (1:800). 4-6. Anti-CaV β 1 antibody preincubated with the control peptide antigen.



Expression of CaVβ1 in rat hippocampus. Immunohistochemical staining of rat hippocampus using Anti-CaVβ1 antibody. A. CaVβ1 staining (red) appears in dendrites of the stratum radiatum (arrow). B. Nuclear staining using DAPI as the counterstain (blue). C. Merge image of A and B.