



## Rabbit Anti-CACNB4 antibody

SL11983R

<b>Product Name:</b>	CACNB4
<b>Chinese Name:</b>	L型电压依赖型钙通道β4抗体
<b>Alias:</b>	CAB4; L-type Ca <sup>++</sup> CPβ4; CACB4_HUMAN; Cacnb4; CACNLB4; Calcium channel voltage dependent beta 4 subunit; Calcium channel voltage dependent subunit beta 4; Calcium channel voltage-dependent subunit beta 4; Dihydropyridine sensitive L type calcium channel beta 4 subunit; EA5; EIG9; EJM; EJM4; Voltage-dependent L-type calcium channel subunit beta-4.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Sheep,
<b>Applications:</b>	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	58kDa
<b>Cellular localization:</b>	cytoplasmicThe cell membrane
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from human CACNB4/L-type Ca <sup>++</sup> CPβ4:301-400/520
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	Voltage-dependent calcium channels are essential for the release of neurotransmitters. L-type (long lasting current) voltage-dependent calcium channels are composed of four

subunits: an Alpha1 subunit, a Beta subunit, a Beta subunit and an Alpha2 Gamma subunit. The Beta subunit is encoded by four genes, designated Beta1-Beta 4, all of which contribute to the diversity of calcium currents and are involved in membrane trafficking of the Beta subunit. L-type  $Ca^{++}$  CP Beta 4, also known as CACNB4 (Calcium channel voltage-dependent subunit beta 4), CACNLB4 or CAB4, is a 484 amino acid protein that contains one SH3 domain and is expressed in ovary, brain and smooth muscle. Functioning as one of the four components of the Beta subunit, L-type  $Ca^{++}$  CP Beta 4 increases the peak calcium current in voltage-dependent calcium channels, thereby shifting the voltage dependencies of activation and inactivation and controlling G protein inhibition and Beta membrane targeting. Two isoforms of L-type  $Ca^{++}$  CP Beta4 exist due to alternative splicing events.

**Function:**

The beta subunit of voltage-dependent calcium channels contributes to the function of the calcium channel by increasing peak calcium current, shifting the voltage dependencies of activation and inactivation, modulating G protein inhibition and controlling the alpha-1 subunit membrane targeting.

**Subunit:**

The L-type calcium channel is composed of four subunits: alpha-1, alpha-2, beta and gamma. Interacts with FASLG.

**Tissue Specificity:**

Expressed predominantly in the cerebellum and kidney.

**DISEASE:**

Genetic variations in CACNB4 are the cause of susceptibility to idiopathic generalized epilepsy type 9 (IGE9) [MIM:607682]. IGE9 is characterized by recurring generalized seizures in the absence of detectable brain lesions and/or metabolic abnormalities. Generalized seizures arise diffusely and simultaneously from both hemispheres of the brain.

Genetic variations in CACNB4 are the cause of susceptibility to juvenile myoclonic epilepsy type 6 (EJM6) [MIM:607682]. EJM6 is a subtype of idiopathic generalized epilepsy. Patients have afebrile seizures only, with onset in adolescence (rather than in childhood) and myoclonic jerks which usually occur after awakening and are triggered by sleep deprivation and fatigue.

**Similarity:**

Belongs to the calcium channel beta subunit family.  
Contains 1 SH3 domain.

**SWISS:**

O00305

**Gene ID:**

785

**Database links:**

[Entrez Gene: 785](#) Human

[Entrez Gene: 12298](#) Mouse

[Entrez Gene: 58942](#) Rat

[Omin: 601949](#) Human

[SwissProt: O00305](#) Human

[SwissProt: Q8R0S4](#) Mouse

[Unigene: 120725](#) Human

[Unigene: 330223](#) Mouse

[Unigene: 472778](#) Mouse

[Unigene: 9863](#) Rat

**Important Note:**

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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