



Rabbit Anti-CACNA1B (N type) antibody

SL10490R

Product Name	CACNA1B (N type)
Chinese Name	电压依赖型 N 型钙通道 α 1B 抗体
Alias	CAC1B_HUMAN; Voltage-dependent N-type calcium channel subunit alpha-1B; Brain calcium channel III; BIII; Calcium channel, L type, alpha-1 polypeptide isoform 5; Voltage-gated calcium channel subunit alpha Cav2.2; voltage-dependent N-type calcium channel subunit alpha-1B isoform 1; calcium channel, voltage-dependent, L type, alpha; 1B subunit; voltage-dependent N-type calcium channel subunit alpha-1B; calcium channel, N type; calcium channel, voltage-dependent, alpha 1B subunit, N type; calcium channel alpha12.2 subunit; Cav2.2 voltage-gated Ca ²⁺ channel.
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, (predicted: Mouse, Rat,) IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000 (Paraffin sections need antigen repair)
Applications	not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	257kDa
Cellular localization	The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human CACNA1B (N type) : 101-200/2339 <Extracellular>
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in

human, therapeutic or diagnostic applications.

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The protein encoded by this gene is the pore-forming subunit of an N-type voltage-dependent calcium channel, which controls neurotransmitter release from neurons. The encoded protein forms a complex with alpha-2, beta, and delta subunits to form the high-voltage activated channel. This channel is sensitive to omega-conotoxin-GVIA and omega-agatoxin-IIIa but insensitive to dihydropyridines. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2011].

Function:

Voltage-sensitive calcium channels (VSCC) mediate the entry of calcium ions into excitable cells and are also involved in a variety of calcium-dependent processes, including muscle contraction, hormone or neurotransmitter release, gene expression, cell motility, cell division and cell death. The isoform alpha-1B gives rise to N-type calcium currents. N-type calcium channels belong to the 'high-voltage activated' (HVA) group and are blocked by omega-conotoxin-GVIA (omega-CTx-GVIA) and by omega-agatoxin-IIIa (omega-Aga-IIIa). They are however insensitive to dihydropyridines (DHP), and omega-agatoxin-IVA (omega-Aga-IVA). Calcium channels containing alpha-1B subunit may play a role in directed migration of immature neurons.

Product Detail

Subunit:

Multisubunit complex consisting of alpha-1, alpha-2, beta and delta subunits in a 1:1:1:1 ratio. The channel activity is directed by the pore-forming and voltage-sensitive alpha-1 subunit. In many cases, this subunit is sufficient to generate voltage-sensitive calcium channel activity. The auxiliary subunits beta and alpha-2/delta linked by a disulfide bridge regulate the channel activity. Interacts with RIMS1 and RIMBP2.

Subcellular Location:

Membrane; Multi-pass membrane protein.

Tissue Specificity:

Isoform Alpha-1b-1 and isoform Alpha-1b-2 are expressed in the central nervous system, but not in skeletal muscle or aorta.

Post-translational modifications:

Phosphorylated in vitro by CaM-kinase II, PKA, PKC and CGPK.

Similarity:

Belongs to the calcium channel alpha-1 subunit (TC 1.A.1.11) family. CACNA1B subfamily.

Contains 1 EF-hand domain.

SWISS:
Q00975

Gene ID:
774

Database links:

[Entrez Gene: 774](#) Human

[Entrez Gene: 257648](#) Rat

[Omim: 601012](#) Human

[SwissProt: Q00975](#) Human

[SwissProt: Q05152](#) Rabbit

[SwissProt: Q02294](#) Rat