



Rabbit Anti-Rat CACNA1A (2150-2210) polyclonal antibody (CABT-L1945)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	This antibody react with Rat and mouse. Other species not yet tested.
Target	Rat CACNA1A
Immunogen	A synthetic peptide from aa region of 2150-2210 of rat CACNA1A conjugated to blue carrier protein was used as the antigen. The peptide is homologous in mouse.
Isotype	IgG
Source/Host	Rabbit
Species Reactivity	Rat, Mouse
Purification	Whole serum
Conjugate	Unconjugated
Applications	IHC, WB
Reconstitution	Reconstitute in 100 µl of sterile water. Centrifuge to remove any insoluble material.
Format	Lyophilized
Size	100 µl
Preservative	None
Storage	Maintain the lyophilised/reconstituted antibodies frozen at -20°C for long term storage and refrigerated at 2-8°C for a shorter term. When reconstituting, glycerol (1:1) may be added for an additional stability. Avoid freeze and thaw cycles.

BACKGROUND

Introduction

Voltage-dependent calcium channels 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, and gene expression. Calcium channels are multisubunit complexes composed of alpha-1, beta, alpha-2/delta, and gamma subunits. The channel activity is directed by the pore-forming alpha-1 subunit, whereas, the others act as auxiliary subunits regulating this activity. The distinctive properties of the calcium channel types are related primarily to the expression of a variety of alpha-1 isoforms, alpha-1A, B, C, D, E, and S. This gene encodes the alpha-1A subunit, which is predominantly expressed in neuronal tissue. Mutations in this gene are associated with 2 neurologic disorders, familial hemiplegic migraine and episodic ataxia 2. This gene also exhibits polymorphic variation due to (CAG)_n-repeats. Multiple transcript variants encoding different isoforms have been found for this gene. In one set of transcript variants, the (CAG)_n-repeats occur in the 3' UTR, and are not associated with any disease. But in another set of variants, an insertion extends the coding region to include the (CAG)_n-repeats which encode a polyglutamine tract. Expansion of the (CAG)_n-repeats from the normal 4-16 to 21-28 in the coding region is associated with spinocerebellar ataxia 6. [provided by RefSeq, Mar 2010]

Keywords

CACNA1A; calcium channel, voltage-dependent, P/Q type, alpha 1A subunit; BI; EA2; FHM; MHP; APCA; HPCA; MHP1; SCA6

GENE INFORMATION

Gene Name

CACNA1A calcium channel, voltage-dependent, P/Q type, alpha 1A subunit [Homo sapiens (human)]

Official Symbol

CACNA1A

Synonyms

CACNA1A; calcium channel, voltage-dependent, P/Q type, alpha 1A subunit; BI; EA2; FHM; MHP; APCA; HPCA; MHP1; SCA6

Chromosome Location

19p13

Pathway

Calcium Regulation in the Cardiac Cell; Calcium signaling pathway; Cholinergic synapse; Depolarization of the Presynaptic Terminal Triggers the Opening of Calcium Channels; Dopaminergic synapse; GABAergic synapse; Glutamatergic synapse; Integration of energy metabolism;

Function

high voltage-gated calcium channel activity; metal ion binding; protein binding; syntaxin binding; voltage-gated calcium channel activity;