

CACNB4 Rabbit pAb

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Catalog # AP54698

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	O00305
Predicted	Rat, Pig, Dog, Human, Mouse, Chicken, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	58169
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human CACNB4/L-type Ca ⁺⁺ CP β 4
Epitope Specificity	301-400/520
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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.

Additional Information

Gene ID	785
Other Names	Voltage-dependent L-type calcium channel subunit beta-4, CAB4, Calcium channel voltage-dependent subunit beta 4, CACNB4 (HGNC:1404), CACNLB4
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. 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.

Protein Information

Name	CACNB4 (HGNC:1404)
Synonyms	CACNLB4
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.
Tissue Location	Expressed predominantly in the cerebellum and kidney

Background

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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.