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CACNA1A Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21701c

Product Information

Application	WB, E
Primary Accession	O00555
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB53551
Calculated MW	282564

Additional Information

Gene ID	773
Other Names	Voltage-dependent P/Q-type calcium channel subunit alpha-1A, Brain calcium channel I, BI, Calcium channel, L type, alpha-1 polypeptide isoform 4, Voltage-gated calcium channel subunit alpha Cav21, CACNA1A, CACH4, CACN3, CACNL1A4
Target/Specificity	This CACNA1A antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 898-932 amino acids from the Central region of human CACNA1A.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CACNA1A Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CACNA1A (HGNC:1388)
Synonyms	CACH4, CACN3, CACNL1A4
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-1A gives rise to P and/or Q- type calcium currents. P/Q-type calcium channels belong to the 'high- voltage activated' (HVA) group and are specifically blocked by the spider omega-agatoxin-IVA (AC P54282) (By similarity). They are however insensitive to dihydropyridines (DHP).
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Brain specific; mainly found in cerebellum, cerebral cortex, thalamus and hypothalamus. Expressed in the small cell lung carcinoma cell line SCC-9. No expression in heart, kidney, liver or muscle. Purkinje cells contain predominantly P-type VSCC, the Q-type being a prominent calcium current in cerebellar granule cells

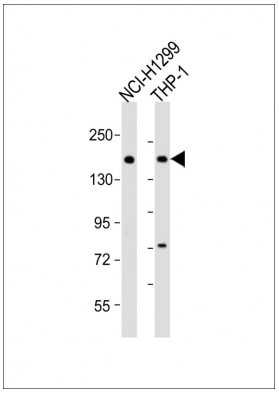
Background

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-1A gives rise to P and/or Q-type calcium currents. P/Q-type calcium channels belong to the 'high-voltage activated' (HVA) group and are blocked by the funnel toxin (Ftx) and by the omega-agatoxin- IVA (omega-Aga-IVA). They are however insensitive to dihydropyridines (DHP), and omega-conotoxin-GVIA (omega-CTx-GVIA).

References

Hans M.,et al.Biophys. J. 76:1384-1400(1999).
Ophoff R.A.,et al.Cell 87:543-552(1996).
Zhuchenko O.,et al.Nat. Genet. 15:62-69(1997).
Toru S.,et al.J. Biol. Chem. 275:10893-10898(2000).
Grimwood J.,et al.Nature 428:529-535(2004).

Images



All lanes : Anti-CACNA1A Antibody (Center) at 1:2000 dilution Lane 1: NCI-H1299 whole cell lysate Lane 2: THP-1 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 282 kDa Blocking/Dilution buffer: 5% NFDM/TBST.