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CACNA2D2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13380C

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q9NY47
Other Accession	NP_001167522.1, NP_001005505.1
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32703
Calculated MW	129817
Antigen Region	643-671

Additional Information

Gene ID	9254
Other Names	Voltage-dependent calcium channel subunit alpha-2/delta-2, Voltage-gated calcium channel subunit alpha-2/delta-2, Voltage-dependent calcium channel subunit alpha-2-2, Voltage-dependent calcium channel subunit delta-2, CACNA2D2, KIAA0558
Target/Specificity	This CACNA2D2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 643-671 amino acids from the Central region of human CACNA2D2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	CACNA2D2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CACNA2D2

Synonyms	KIAA0558
Function	The alpha-2/delta subunit of voltage-dependent calcium channels regulates calcium current density and activation/inactivation kinetics of the calcium channel. Acts as a regulatory subunit for P/Q- type calcium channel (CACNA1A), N-type (CACNA1B), L-type (CACNA1C OR CACNA1D) and possibly T-type (CACNA1G) (PubMed:15111129, PubMed:23339110). Overexpression induces apoptosis.
Cellular Location	Membrane; Single-pass type I membrane protein. Note=Colocalizes with CACNA1A in lipid raft fractions.
Tissue Location	Predominantly present in cerebellar cortex. Present in various lung tumor cell lines, while it is absent in normal lung (at protein level). Highly expressed in heart, lung, testis, pancreas and skeletal muscle. Also expressed in kidney, liver, placenta and brain

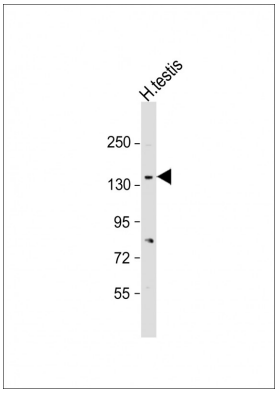
Background

This gene encodes a member of the alpha-2/delta subunit family, a protein in the voltage-dependent calcium channel complex. Calcium channels mediate the influx of calcium ions into the cell upon membrane polarization and consist of a complex of alpha-1, alpha-2/delta, beta, and gamma subunits in a 1:1:1:1 ratio. Various versions of each of these subunits exist, either expressed from similar genes or the result of alternative splicing. Research on a highly similar protein in rabbit suggests the protein described in this record is cleaved into alpha-2 and delta subunits. Alternate transcriptional splice variants of this gene, encoding different isoforms, have been characterized.

References

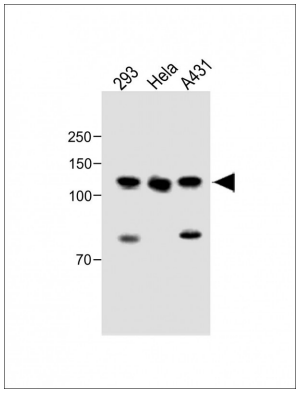
Donato, R., et al. J. Neurosci. 26(48):12576-12586(2006) Ivanov, S.V., et al. Am. J. Pathol. 165(3):1007-1018(2004) Carboni, G.L., et al. Oncogene 22(4):615-626(2003) Honorio, S., et al. Mol. Cell. Probes 15(6):391-393(2001) Angeloni, D., et al. Mol. Cell. Probes 15(2):125-127(2001)

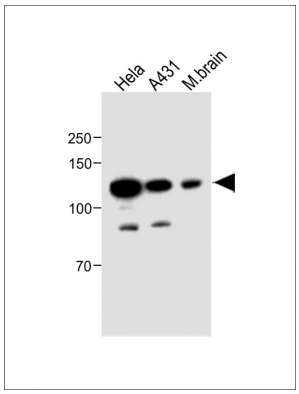
Images



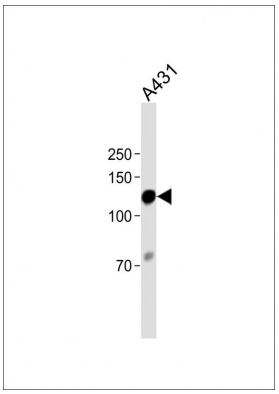
Anti-CACNA2D2 Antibody (Center) at 1:2000 dilution + human testis lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 130 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes: Anti-CACNA2D2 Antibody (Center) at 1:1000 dilution Lane 1: 293 whole cell lysate Lane 2: Hela whole cell lysate Lane 3: A431 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 130 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

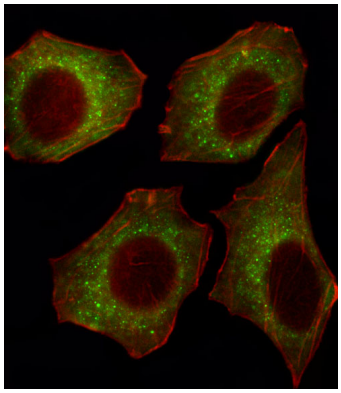




All lanes: Anti-CACNA2D2 Antibody (Center) at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: A431 whole cell lysate Lane 3: Mouse brain lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 130 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

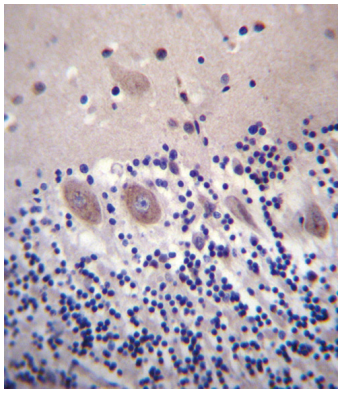


All lanes: Anti-CACNA2D2 Antibody (Center) at 1:1000 dilution + A431 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 130 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



Fluorescent image of U251 cell stained with CACNA2D2 Antibody (Center)(Cat#AP13380c).U251 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with CACNA2D2 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C).CACNA2D2 immunoreactivity is localized to Cytoplasm significantly.

CACNA2D2 Antibody (Center) (Cat. #AP13380c)immunohistochemistry analysis in formalin fixed and paraffin embedded human cerebellum tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of CACNA2D2 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



Citations

- Discovery of Biomarker Panels for Neural Dysfunction in Inborn Errors of Amino Acid Metabolism.

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