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**Product Name: Cacna2d4 Rabbit Polyclonal Antibody****Catalog #: APRab07819**

For research use only.

**Summary**

<b>Description</b>	Rabbit polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,ELISA
<b>Reactivity</b>	Human,Mouse,Rat
<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Unmodified
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Concentration</b>	1mg/ml
<b>Storage</b>	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
<b>Shipping</b>	Ice bags
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

**Application**

<b>Dilution Ratio</b>	WB 1:500-1:2000,ELISA 1:10000-1:20000
<b>Molecular Weight</b>	130kDa

**Antigen Information**

<b>Gene Name</b>	CACNA2D4
<b>Alternative Names</b>	CACNA2D4; Voltage-dependent calcium channel subunit alpha-2/delta-4; Voltage-gated calcium channel subunit alpha-2/delta-4
<b>Gene ID</b>	93589.0
<b>SwissProt ID</b>	Q7Z3S7
<b>Immunogen</b>	The antiserum was produced against synthesized peptide derived from human CACNA2D4. AA range:548-597

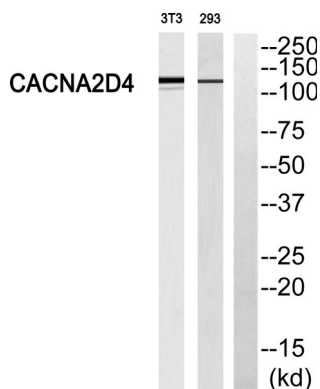
**Background**

calcium voltage-gated channel auxiliary subunit alpha2delta 4(CACNA2D4) Homo sapiens 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 have been observed but have not been thoroughly characterized. [provided by RefSeq, Jul 2008],disease:Defects in CACNA2D4 are the cause of retinal cone dystrophy 4 (RCD4) [MIM:610478]. RCD4 is characterized by minimal symptoms except for slowly progressive reduction in visual acuity.,domain:The MIDAS-like motif in the VWFA domain binds divalent metal cations and is required to promote trafficking of the alpha-1 (CACNA1) subunit to the plasma membrane by an integrin-like switch.,function:The alpha-2/delta subunit of voltage-dependent calcium channels regulates calcium current density and activation/inactivation kinetics of the calcium channel.,miscellaneous:In contrast to CACNA2D1 and CACNA2D2, it does not bind gabapentin, an antiepileptic drug.,PTM:May be proteolytically processed into subunits alpha-2-4 and delta-4 that are disulfide-linked. It is however unclear whether such cleavage really takes place in vivo and has a functional role.,similarity:Belongs to the calcium channel subunit alpha-2/delta family.,similarity:Contains 1 cache domain.,similarity:Contains 1 VWFA domain.,subunit:Dimer formed of alpha-2-2 and delta-2 chains; disulfide-linked. Voltage-dependent calcium channels are multisubunit complexes, consisting of alpha-1 (CACNA1), alpha-2 (CACNA2D), beta (CACNB) and delta (CACNA2D) subunits in a 1:1:1:1 ratio (Probable). Interacts with CACNA1C and CACNB3.,tissue specificity:Predominantly expressed in certain types of endocrine cells. Present in the Paneth cells of the small intestine. Also present in the erythroblasts in the fetal liver, in the cells of the zona reticularis of the adrenal gland and in the basophiles of the pituitary. Present at low level in some brain regions such as the cerebellum (at protein level),

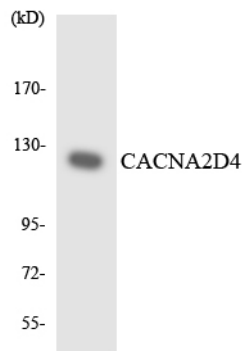
## Research Area

MAPK\_ERK\_Growth;MAPK\_G\_Protein;Cardiac muscle contraction;Hypertrophic cardiomyopathy (HCM);Arrhythmogenic right ventricular cardiomyopathy (ARVC);Dilated cardiomyopathy;

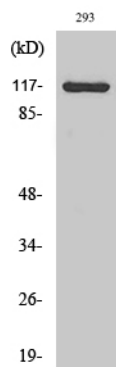
## Image Data



Western blot analysis of CACNA2D4 Antibody. The lane on the right is blocked with the CACNA2D4 peptide.



Western blot analysis of the lysates from COLO205 cells using CACNA2D4 antibody.



Western Blot analysis of various cells using Cacna2d4 Polyclonal Antibody