Datasheet for ABIN7582011

anti-CACNA2D3 antibody (Extracellular) (Atto 594)

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Overview

Quantity:	50 µL
Target:	CACNA2D3
Binding Specificity:	AA 942-955, Extracellular
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This CACNA2D3 antibody is conjugated to Atto 594
Application:	Immunohistochemistry (IHC), Immunochromatography (IC), Immunofluorescence (IF), Live Cell Imaging (LCI)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to CACNA2D3 (CaVα2δ3) Subunit Conjugated to the Fluorescent Dye ATTO-594
Immunogen:	CSWWHSDMTAKAQK, corresponding to amino acid residues 942-955 of rat CaValpha2delta3
Sequence:	CSWWHSDMTA KAQK
Isotype:	IgG
Specificity:	Extracellular
Predicted Reactivity:	Mouse,human - identical
Characteristics:	Anti-CACNA2D3 (CaVα2δ3) (extracellular) Antibody (ABIN7581838) is a highly specific antibody directed against an extracellular epitope of the rat protein. The antibody can be used in western

Product Details

	blot, immunohistochemistry and immunocytochemistry applications. It has been designed to recognize CaVα2δ3 from rat, mouse and human samples. Anti-CACNA2D3 (CaVα2δ3) (extracellular)-ATTO Fluor-594 Antibody (ABIN7581838)-AR) is directly labeled with an fluorescent dye. ATTO dyes are characterized by strong absorption (high extinction coefficient), high fluorescence quantum yield, and high photo-stability. The fluorescent label belongs to the class of Rhodamine dyes and can be used with fluorescent equipment typically optimized to detect Texas Red and Alexa-594. Anti-CACNA2D3 (CaVα2δ3) (extracellular)-ATTO Fluor-594 Antibody has been tested in immunocytochemistry and immunohistochemistry applications and is especially suited for experiments requiring simultaneous labeling of different markers.
Purification:	Affinity purified on immobilized antigen.

Target Details

Target:	CACNA2D3
Alternative Name:	CACNA2D3 (CACNA2D3 Products)
Background:	Voltage-dependent calcium channel subunit alpha-2/delta-3,Voltage-gated Ca2+ (CaV) channels are ubiquitously expressed and function as Ca2+ conducting pores in the plasma membrane1. On the basis of their voltage activation properties, CaV channels can be further divided into two broad groups: the low (T-type) and high (L, N, P, Q and R-type) threshold-activated channels2. HVA channels are heteromultimers composed of four independently encoded proteins, the pore-forming α1 subunit, which triggers Ca2+ flow across the membrane, and the auxiliary subunits α2δ, γ, and β3. The Ca2+ channel α2δ subunit is a heavily glycosylated protein that is encoded by a single gene and post-translationally cleaved to yield α2 and δ subunits linked by a disulfide bond with a single transmembrane segment4. The α2δ subunit regulates many functional aspects of Ca2+ channels, such as gating, regulating voltage dependent kinetics, and increasing functional channel density on the plasma membrane5.There are four proteins that comprise CaVα2δ: CaVα2δ1, CaVα2δ2, CaVα2δ3 and CaVα2δ46. The CaV α2δ3 subunit is predominantly expressed in neuronal tissue. The CaVα2δ3 subunit regulates all classes of HVA calcium channels. The Caα2δ3 subunits in the nerve terminal function in synaptic morphogenesis and cytoskeletal organization, and that this role is independent of their function in α1 subunit localization and physiology.CaVα2δ3 is likely to be the primary presynaptic α2δ isoform mediating morphological development of the neuromuscular junction (NMJ), since null alleles have such a large effect on NMJ development and abolish all action-potential evoked transmission7. Recent study shows that methylation-dependent transcriptional silencing of CaVα2δ3 may contribute to the metastatic phenotype of breast

Target Details

	cancer8.
Gene ID:	306243
UniProt:	Q8CFG5

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: N/A Application Dilutions Western blot wb: N/A
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	50 µL double distilled water (DDW).
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 1 % BSA with 0.05 % sodium azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C, protected from the light, for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).