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Product datasheet for TA328760

Cacna2d2 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	(C)DLEAWAEKFKVLASNR, corresponding to amino acid residues 850-865 of rat Cava2d2. Extracellular, N-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	calcium voltage-gated channel auxiliary subunit alpha2delta 2
Database Link:	NP_783182 Entrez Gene 9254 HumanEntrez Gene 56808 MouseEntrez Gene 300992 Rat Q8CFG6

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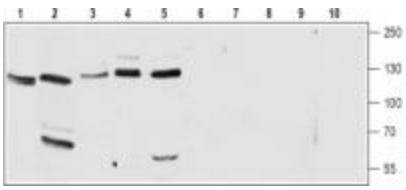
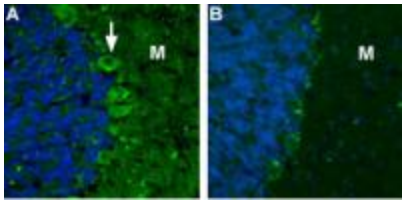
Background: Voltage-gated Ca2+ channels (CaV), enable the passage of Ca2+ ions in a voltage dependent manner. These heteromeric entities are formed in part by the pore-forming a1 subunit which determines the biophysical and pharmacological properties of the channel.CaV1 and CaV2 channels are high-voltage activated (HVA) CaV channels. The a1 subunit of these channels normally interacts and associates with a2d subunit, a membrane anchored protein and CaVÃ?, a cytosolic protein.Four a2d subunits have been cloned to date: a2d1- 4. This subunit originates from a single gene. The corresponding protein is modified by post-translational cleavage yielding a a2 subunit which is disulfide bonded to the d subunit. All a2d subunits are GPI- (glycosylphosphatidylinositol) anchored proteins3. The role of this subunit is important for the membrane trafficking of the a1 subunit, and also has a role in influencing the biophysical properties of the channel.a2d can be expressed as various splice variants and expressed in a tissue specific manner. a2d2 can be detected in the brain, heart, lung, spleen and liver.Gabapentin and pregabalin are two commonly used anti-epileptic drugs. They act on CaV channels via the a2d1 and a2d2 subunits by disturbing their membrane trafficking, thereby decreasing Ca2+ currents.

Synonyms: CACNA2D; KIAA0558; LUAC11.1

Product images:



Western blot analysis of rat lung (lanes 1 and 6), rat brain (lanes 2 and 7), Mouse brain (lanes 3 and 8), rat heart (lanes 4 and 9) and mouse heart (lanes 5 and 10) lysates: 1-5. Anti-Cava2d2 (extracellular) antibody, (1:200). 6-10. Anti-Cava2d2 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of Cava2d2 in rat cerebellum. Immunohistochemical staining rat cerebellum using Anti-Cava2d2 (extracellular) antibody. A. Cava2d2 (green) appears in the soma of purkinje cells (arrow) and in the molecular layer (M). B. Pre-incubation of the antibody with the control peptide antigen blocks staining of Purkinje cells and molecular layer. DAPI is used as the counterstain (blue).