

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% NaN ₃ . |
| 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 Human Entrez Gene 56808 Mouse Entrez Gene 300992 Rat Q8CFG6 |



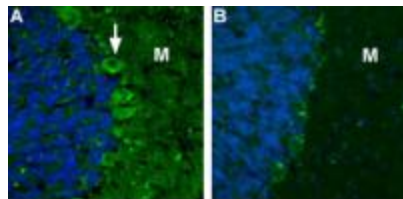
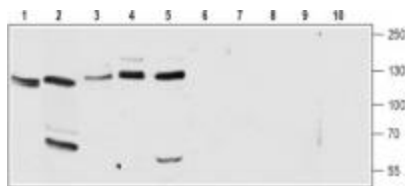
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Background:

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 α_1 subunit which determines the biophysical and pharmacological properties of the channel. CaV1 and CaV2 channels are high-voltage activated (HVA) CaV channels. The α_1 subunit of these channels normally interacts and associates with $\alpha_2\delta$ subunit, a membrane anchored protein and $\alpha_2\gamma$, a cytosolic protein. Four $\alpha_2\delta$ subunits have been cloned to date: $\alpha_2\delta_1$ -4. This subunit originates from a single gene. The corresponding protein is modified by post-translational cleavage yielding a α_2 subunit which is disulfide bonded to the δ subunit. All $\alpha_2\delta$ subunits are GPI- (glycosylphosphatidylinositol) anchored proteins³. The role of this subunit is important for the membrane trafficking of the α_1 subunit, and also has a role in influencing the biophysical properties of the channel. $\alpha_2\delta$ can be expressed as various splice variants and expressed in a tissue specific manner. $\alpha_2\delta_2$ 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 $\alpha_2\delta_1$ and $\alpha_2\delta_2$ 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).