

## Product datasheet for **TA328948**

### Cnga2 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)KQNHEDDYLSDGINTPEP, corresponding to amino acid residues 643-660 of rat CNGA2. . Intracellular, C-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 <sub>3</sub> .
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:	cyclic nucleotide gated channel alpha 2
Database Link:	<a href="#">NP_037060</a> <a href="#">Entrez Gene 12789 Mouse</a> <a href="#">Entrez Gene 25411 Rat</a> <a href="#">Q00195</a>



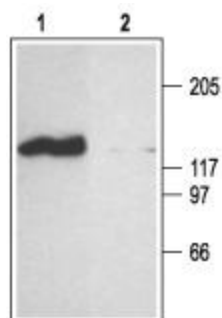
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**Background:**

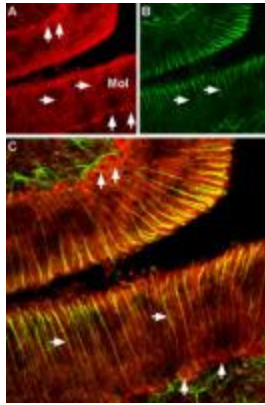
Cyclic nucleotides are important second messengers in many cellular functions such as visual transduction, and relaxation of smooth muscle cells. Cyclic nucleotides exert their cellular functions through three major classes of cellular receptors, one of them is the cyclic nucleotide-gated (CNG) channels. The CNG channels are non-selective cation channels facilitating the influx of Na<sup>+</sup> and Ca<sup>2+</sup> ions, following activation by intracellular cyclic nucleotides. In vertebrates, six members of the CNG channel family were identified and grouped according to sequence homology into two subtypes, CNGA and CNGB. To date, four types of the a subunits (CNGA1-4) and two b subunits (CNGB1, CNGB3) have been characterized. Native CNG channels are composed of a and b subunits in a tetrameric configuration. Each subunit contains 6 TM domains and intracellular cAMP or cGMP binding domains, but are also modulated by other factors including phosphorylation and calmodulin. In a heterologous expression system, only the a subunits are capable of forming functional homomeric channels. CNG ion channels are essential in visual and olfactory signal transduction. CNG channels were originally detected in rod and cone photoreceptors and olfactory receptor cells, where they mediate the transduction of external sensory stimuli into neuronal activity. CNGA2 is predominantly expressed in olfactory neurons (the olfactory type receptor). However, electrophysiological and molecular data indicate that CNGA1, and especially CNGA2, are widely distributed and functionally active in many regions of the brain, including the hippocampus, cerebral cortex, cerebellum, and brainstem.

**Synonyms:**

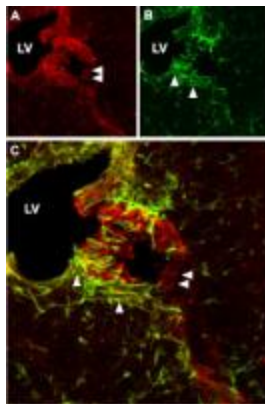
CNCA; CNCA1; CNCG2; CNG-2; CNG2; FLJ46312; OCNC1; OCNCa; OCNCalpha

**Product images:**

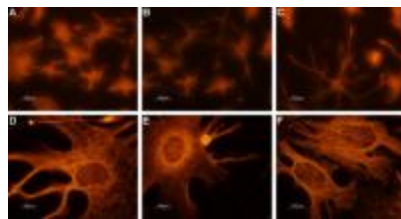
Western blot analysis of rat brain membranes: 1. Anti-CNGA2 antibody, (1:200). 2. Anti-CNGA2 antibody, preincubated with the control peptide antigen.



Expression of CNGA2 in rat cerebellum. Immunohistochemical staining of rat cerebellum using Anti-CNGA2 antibody. A. CNGA2 (red) appears in Purkinje cells (vertical arrows) and in astrocytic fibers (horizontal arrows) traversing the cerebellar molecular layer (Mol). B. Staining of astrocytes with mouse anti-glial fibrillary acidic protein (GFAP, green) demonstrates the full distribution of astrocytic fibers (horizontal arrows) in the cerebellum. C. Confocal merge of panels A and B.



Expression of CNGA2 in mouse cerebrum. Immunohistochemical staining of mouse cerebrum using Anti-CNGA2 antibody. A. CNGA2 (red) appears in cells lining up the wall of the lateral ventricle (LV) (horizontal arrows). B. Staining of astrocytes with mouse anti-glial fibrillary acidic protein (GFAP, green) demonstrates penetration of astrocytic fibers (vertical arrows) into the wall of the lateral ventricle. C. Confocal merge of panels A and B.



Expression of CNGA2 in rat cerebellum primary culture. Immunocytochemical staining of paraformaldehyde-fixed and permeabilized rat cerebellum primary culture. A-F. Immunocytochemical staining using Anti-CNGA2 antibody, (1:100) followed by goat anti-rabbit-AlexaFluor-555 secondary antibody. Magnification: A-C: x20 D-F: x100