

Product datasheet for **TA328963**

Cnga1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:200-1:2000
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)NDNGSLSEESINED, corresponding to amino acid residues 41-54 of rat CNGA1 . Intracellular, 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:	cyclic nucleotide gated channel alpha 1
Database Link:	NP_445949 Entrez Gene 85259 Rat Q62927



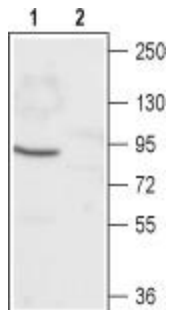
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Background:

Cyclic Nucleotide-Gated (CNG) channels belong to the superfamily of voltage-gated ion channels. Although permeable to various ions such as the monovalent Na⁺ and K⁺ ions, and the divalent Ca²⁺ ion, they are gated by the intracellular binding of the cyclic nucleotides cAMP and cGMP and not by voltage per se (CNGs bind preferably to cGMP). Six channels form this subfamily: The A subunit (CNGA1-4) and the B subunit (CNGB1 and CNGB3). Functional entities are formed by the assembly of four subunits. Each subunit consists of six membrane spanning domains, where the fourth transmembrane domain is highly positively charged, a pore domain between transmembrane domains five and six, and intracellular N- and C-termini. The cyclic nucleotide binding domain is located in the C-terminal region and is responsible for the channel gating upon cyclic nucleotide binding. These channels are highly expressed in retinal photoreceptors and olfactory neurons where their role has been extensively studied². CNG channels have also been detected in brain, testis and kidney although their role in these tissues has yet to be unraveled. When heterologously expressed all subunits with exception of CNGA4, CNGB1 and CNGB3 can form functional homomeric channels¹. In rod photoreceptors, functional channels are composed of three CNGA1 subunits and one CNGB1 subunit. Mutations in either of CNGA1 or CNGB1 genes are responsible for the onset of retinitis pigmentosa, a progressive degeneration of rod and cone receptors which is presented in part by night blindness. As no knock out CNGA1 model systems exist, a transgenic mice line with lowered CNGA1 protein levels demonstrated symptoms which are reminiscent of retinitis pigmentosa, in agreement with the fact that a lack of CNGA1 is responsible for retinitis pigmentosa.

Synonyms:

CNCG; CNCG1; CNG-1; CNG1; RCNC1; RCNCa; RCNCalpha; RP49

Product images:

Western blot analysis of rat eye lysate: 1. Anti-CNGA1 antibody, (1:200). 2. Anti-CNGA1 antibody, preincubated with the control peptide antigen.