



Rabbit Anti-GARP antibody

SL12093R

Product Name:	GARP
Chinese Name:	环磷酸鸟苷门控Channel proteinCNG4抗体
Alias:	CNCG2; CNCG3L; CNCG4; CNG 4; CNG-4; CNG channel 4; CNG channel beta 1; CNG4; CNGB 1; CNGB1; CNGB1B; Cyclic nucleotide gated cation channel 4; Cyclic nucleotide gated cation channel; Cyclic nucleotide gated cation channel beta 1; Cyclic nucleotide gated cation channel gamma; Cyclic nucleotide gated cation channel modulatory subunit; Cyclic nucleotide gated channel (photoreceptor) cGMP gated 3 (gamma) like; Cyclic nucleotide gated channel beta 1; GAR1; Glutamic acid rich protein; RCNC2; RCNCb; RCNCbeta; RP45; CNGB1_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Pig,Cow,Horse,Rabbit,Sheep,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	140kDa
Cellular localization:	The cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human CNG4:856-960/1251<Extracellular>
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed

Cyclic nucleotide-gated (CNG) cation channels are heteromeric complexes made up of principal alpha and modulatory beta subunits (1,2). The alpha subunits consist of CNG1-3 and form functional cation channels by themselves (1,2). The beta subunits consist of CNG4-6 and, unlike the alpha subunits, do not form functional channels, but rather modify the properties of channels (1,2). CNG channels are essential components of olfactory and visual transduction (1,2). In olfactory neurons, CNG2, CNG4.3 and CNG5 form Ca²⁺ permeable channels, which open and depolarize the cell in response to cAMP (1-3). In rod photoreceptors, CNG1 and CNG4.1 combine to form Ca ion permeable channels, which give rise to a current in response to cGMP (1-3). CNG3 and CNG6 are expressed in cone receptors and may combine to form a native cGMP-activated channel (2,3). CNG channels have been implicated in other areas (4-6). CNG1 is also expressed in medium-sized and small-sized arteries, suggesting a role for CNG in the regulation of arterial blood pressure and of blood supply to different regions (4). CNG1, CNG4.1 and CNG4.2 have been detected in the rat pineal gland (5). CNG2, CNG4.3 and CNG5 are present in GT1 cell lines and may play a role in the secretion of gonadotropin-releasing hormone (6).

Function:

GARP is a subunit of cyclic nucleotide-gated (CNG) channels, nonselective cation channels, which play important roles in both visual and olfactory signal transduction. When associated with CNGA1, it is involved in the regulation of ion flow into the rod photoreceptor outer segment (ROS), in response to light-induced alteration of the levels of intracellular cGMP. Defects in GARP are the cause of retinitis pigmentosa type 45 (RP45). RP leads to degeneration of retinal photoreceptor cells. Patients typically have night vision blindness and loss of midperipheral visual field. As their condition progresses, they lose their far peripheral visual field and eventually central vision as well.

Subunit:

Heterooligomeric complex with CNGA1.

Subcellular Location:

Membrane; Multi-pass membrane protein.

Tissue Specificity:

Prominently expressed in retina.

DISEASE:

Defects in CNGB1 are the cause of retinitis pigmentosa type 45 (RP45) [MIM:613767]. RP leads to degeneration of retinal photoreceptor cells. Patients typically have night vision blindness and loss of midperipheral visual field. As their condition progresses, they lose their far peripheral visual field and eventually central vision as well.

Similarity:

Belongs to the cyclic nucleotide-gated cation channel (TC 1.A.1.5) family. CNGB1 subfamily.

Product Detail:

Contains 1 cyclic nucleotide-binding domain.

SWISS:
Q14028

Gene ID:
1258

Database links:

[Entrez Gene: 1258](#) Human

[Entrez Gene: 333329](#) Mouse

[Entrez Gene: 83686](#) Rat

[Omin: 600724](#) Human

[SwissProt: Q14028](#) Human

- [wissProt: O35788](#) Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.