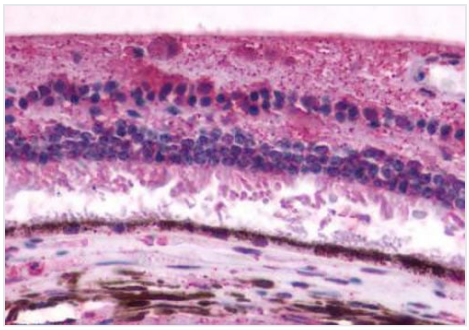
RGR Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	RGR, Polyclonal Antibody
Full Product Name	Rabbit Polyclonal to Human RGR
Product Gene Name	anti-RGR antibody
Product Synonym Names	Anti-RGR Antibody (Cytoplasmic Domain) IHC-plus; RGR; RGR-opsin; RP44; Human RGR
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Gibbon, Human, Monkey
Form/Format	PBS, 0.1% sodium azide.
Purity/Purification	Immunoaffinity Purified
Concentration	1 mg/ml (lot specific)
Specificity	Human RGR. BLAST analysis of the peptide immunogen showed no homology with other human proteins.
Preparation and Storage	Long term: -70 degree C; Short term: +4 degree C
Molecular Weight	27,728 Da
OMIM	gene 613769
3D Structure	ModBase 3D Structure for P47804
Target Species	Human
Immunogen Description	Synthetic 16 amino acid peptide from 3rd cytoplasmic domain of human RGR. Percent identity with other species by BLAST analysis: Human, Gibbon, Monkey, Marmoset (100%); Gorilla, Rat, Panda, Rabbit, Horse (88%); Dog, Hamster, Elephant (81%).
Immunogen Type	Synthetic peptide
Immunogen	RGR antibody was raised against synthetic 16 amino acid peptide from 3rd cytoplasmic domain of human RGR. Percent identity with other species by BLAST analysis: Human, Gibbon, Monkey, Marmoset (100%); Gorilla, Rat, Panda, Rabbit, Horse (88%); Dog, Hamster, Elephant (81%).
Antigen Modification	Cytoplasmic Domain
Product Categories/Family for anti-RGR antibody	Family: GPCR; Subfamily: Opsin
Applications Tested/Suitable for anti-RGR antibody	Immunohistochemistry (IHC - Paraffin)
Application Notes for anti-RGR antibody	IHC-P (10 - 19 ug/ml)
Related Product Information for anti-RGR antibody	Retinal G protein-coupled receptor RPE, a member of the Opsin subfamily of GPCRs has been shown to be involved in retinitis pigmentosa. It preferentially binds all-trans retinal rather than 11-cis retinal, which is normally found in rhodopsin. RPE has two isoforms produced by alternative splicing.
Other Notes	Small volumes of anti-RGR antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for RGR purchase	MBS246712 is an antibody targeting RGR. Also known as Rabbit Polyclonal to Human RGR. Reactive in Gibbon, Human, Monkey. Host: Rabbit.



Immunohistochemistry (IHC) of anti-RGR antibody
Anti-RGR antibody IHC of human eye, retina. Immunohistochemistry of formalin-fixed, paraffin-embedded tissue after heat-induced antigen retrieval.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RGR. It may not necessarily be applicable to this product.

NCBI GI #	21361329
NCBI GeneID	5995
NCBI Accession #	NP_002912.2
UniProt Primary Accession #	P47804
UniProt Secondary Accession #	Q96FC5; A6NKK7
UniProt Related Accession #	P47804
GenBank Nucleotide #	NM_002921.3
NCBI Official Full Name	RPE-retinal G protein-coupled receptor isoform 1
NCBI Official Synonym Full Names	retinal G protein coupled receptor
NCBI Official Symbol	RGR
NCBI Official Synonym Symbols	RP44
UniProt Protein Name	RPE-retinal G protein-coupled receptor
Protein Family	RPE-retinal G protein-coupled receptor
UniProt Gene Name	RGR
UniProt Entry Name	RGR_HUMAN
NCBI Protein Information	RPE-retinal G protein-coupled receptor; RGR-opsin; RPE retinal G-protein coupled receptor
NCBI Summary for RGR	This gene encodes a putative retinal G-protein coupled receptor. The gene is a member of the opsin subfamily of the 7 transmembrane, G-protein coupled receptor 1 family. Like other opsins which bind retinaldehyde, it contains a conserved lysine residue in the seventh transmembrane domain. The protein acts as a photoisomerase to catalyze the conversion of all-trans-retinal to 11-cis-retinal. The reverse isomerization occurs with rhodopsin in retinal photoreceptor cells. The protein is exclusively expressed in tissue adjacent to retinal photoreceptor cells, the retinal pigment epithelium and Mueller cells. This gene may be associated with autosomal recessive and autosomal dominant retinitis pigmentosa (arRP and adRP, respectively). Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]

UniProt Comments for RGR	RGR: Receptor for all-trans- and 11-cis-retinal. Binds preferentially to the former and may catalyze the isomerization of the chromophore by a retinochrome-like mechanism. Defects in RGR are the cause of retinitis pigmentosa type 44 (RP44). RP44 is a retinal dystrophy belonging to the group of pigmentary retinopathies. Retinitis pigmentosa is characterized by retinal pigment deposits visible on fundus examination and primary loss of rod photoreceptor cells followed by secondary loss of cone photoreceptors. 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. Belongs to the G-protein coupled receptor 1 family. Opsin subfamily. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Receptor, GPCR; Membrane protein, multi-pass; Membrane protein, integral; GPCR, family 1 Chromosomal Location of Human Ortholog: 10q23 Cellular Component: integral to plasma membrane Molecular Function: G-protein coupled receptor activity; protein binding; chemokine receptor activity; photoreceptor activity Biological Process: G-protein coupled receptor protein signaling pathway; visual perception; phototransduction; chemotaxis; protein-chromophore linkage Disease: Retinitis Pigmentosa 44
Research Articles on RGR	**1.** conclude that the ability of hRgr to activate both Ral and Ras is responsible for its transformation-inducing phenotype and it could be an important contributor in the development of some T-cell malignancies
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