

Product datasheet for **RC203778**

RGR (NM_002921) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RGR (NM_002921) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RGR
Synonyms:	RP44
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC203778 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGATCGCC**

ATGGCAGAGACCAGTGCCTTGCCACCGGCTTCGGGGAGCTCGAGGTGCTGGCTGTGGGGATGGTGTCTAC
TGGTGGAAGCTCTCTCCGGTCTCAGCCTCAATACCCTGACCATCTTCTTTCTGCAAGACCCCGGAGCT
GCGGACTCCCTGCCACCTACTGGTGCTGAGCTTGGCTCTTGGGACAGTGGGATCAGCCTGAATGCCCTC
GTTGCAGCCACATCCAGCCTTCTCCGTGTCTCCACAGGCGCTGGCCCTACGGCTCGGACGGCTGCCAGG
CTCAGCGCTTCCAGGGCTTGTGACAGCGTTGGCCAGCATCTGCAGCAGTGCAGCCATCGCATGGGGGCG
TTATCACCCTACTGCACCCGTAGCCAGCTGGCCCTGGAACCTCAGCCGTCTCTCTGGTGCTTTCGTGTGG
CTGTCTTCTGCCTTCTGGGCAGCTCTGCCCTTCTGGGTGGGGTCACTATGACTATGAGCCACTGGGGA
CATGCTGCACCCTGGACTACTCCAAGGGGGACAGAACTTACCAGCTTCTCTTACCATTGTCCTTCTT
CAACTTCGCCATGCCCTCTTATCAGCATCACTTCTACAGTCTCATGGAGCAGAACTGGGGAAGAGT
GGCCATCTCCAGGTAACACCACTCTGCCAGCAAGGACGCTGTGCTCGGCTGGGGCCCTATGCCATCC
TGTATCTATACGCAGTCATCGCAGACGTGACTTCCATCTCCCCAACTGCAGATGGTGCCCGCCCTCAT
TGCCAAAATGGTGCCACGATCAATGCCATCAACTATGCCCTGGGCAATGAGATGGTCTGCAGGGGAATC
TGGCAGTGCCTCTCACCGCAGAAGAGGGAGAAGGACCGAACCAAG

ACGCGTACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC203778 protein sequence
Red=Cloning site Green=Tags(s)

MAETSALPTGFGELEVLAVGMVLLVEALSGLSLNTLTIFSFCKTPELRTPCHLLVLSLALADSGISLNAL
 VAATSSLLRVSHRRWPYGSQAHGFQGFVTALASICSSAAIAWGRYHHYCTRSQLAWNSAVSLVLFVW
 LSSAFWAALPLLGWHYDYELPGTCTLDYSGDRNFTSFLFTMSFFNFAMPLFITITSYSLMEQKLGKS
 GHLQVNTTLPARTLLLWGOPYAILLYAVIADVTSISPKLQMPALIAKMVPTINAINYALGNEMVCRGI
 WQCLSPQKREKDRTK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6302_h05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002921

ORF Size: 885 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_002921.2](#)

RefSeq Size: 1475 bp

RefSeq ORF: 888 bp

Locus ID: 5995

UniProt ID: [P47804](#)

Cytogenetics: 10q23.1

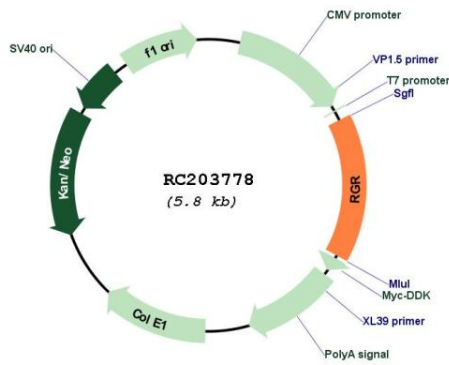
Domains: 7tm_1

Protein Families: Druggable Genome, GPCR, Transmembrane

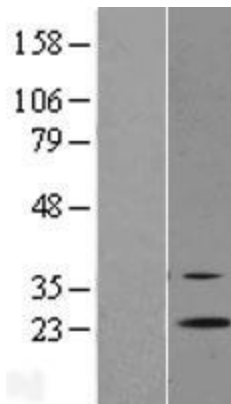
MW: 32.4 kDa

Gene Summary: 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]

Product images:



Circular map for RC203778



Western blot validation of overexpression lysate (Cat# [LY419024]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203778 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).