

## Product datasheet for **RG203778**

### RGR (NM\_002921) Human Tagged ORF Clone

#### Product data:

Product Type: Expression Plasmids  
 Product Name: RGR (NM\_002921) Human Tagged ORF Clone  
 Tag: TurboGFP  
 Symbol: RGR  
 Synonyms: RP44  
 Mammalian Cell Selection: Neomycin  
 Vector: pCMV6-AC-GFP (PS100010)  
 E. coli Selection: Ampicillin (100 ug/mL)  
 ORF Nucleotide Sequence: >RG203778 representing NM\_002921  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGCAGAGACCAGTGCCTTGCCACCGGCTTCGGGGAGCTCGAGGTGCTGGCTGTGGGGATGGTGTCTAC  
 TGGTGGAAAGCTCTCTCCGGTCTCAGCCTCAATACCCTGACCATCTTCTTTCTGCAAGACCCCGGAGCT  
 GCGGACTCCCTGCCACCTACTGGTGTGAGCTTGGCTCTTGGGACAGTGGGATCAGCCTGAATGCCCTC  
 GTTGCAGCCACATCCAGCCTTCTCCGTGTCTCCACAGGCGCTGGCCCTACGGCTCGGACGGCTGCCAGG  
 CTCACGGCTTCCAGGGCTTGTGACAGCGTTGGCCAGCATCTGCAGCAGTGCAGCCATCGCATGGGGGCG  
 TTATCACCCTACTGCACCCGTAGCCAGCTGGCCTGGAACCTCAGCCGTCTCTCTGGTGTCTTCTGTGTGG  
 CTGTCTTCTGCCTTCTGGGCAGCTCTGCCCTTCTGGGTGGGGTCACTATGACTATGAGCCACTGGGGA  
 CATGCTGCACCCTGGACTACTCCAAGGGGGACAGAACTTACCAGCTTCTCTTACCATTGTCCTTCTT  
 CAACTTCGCCATGCCCTCTTATCAGCATCACTTCTACAGTCTCATGGAGCAGAACTGGGGAAGAGT  
 GGCCATCTCCAGGTAACACCACTCTGCCAGCAAGGACGCTGTGCTCGGCTGGGGCCCCATGCCATCC  
 TGTATCTATACGCAGTCATCGCAGAGCTGACTTCCATCTCCCCAACTGCAGATGGTGGCCGCCCTCAT  
 TGCCAAAATGGTGGCCACGATCAATGCCATCAACTATGCCCTGGGCAATGAGATGGTCTGCAGGGGAATC  
 TGGCAGTGCCTCTCACCGCAGAAGAGGGAGAAGGACCGAACCAAG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG203778 representing NM\_002921  
 Red=Cloning site Green=Tags(s)

MAETSALPTGFGELEVLAVGMVLLVEALSGLSLNLTIFSFCKTPELRTPCHLLVLSLALADSGISLNAL  
 VAATSSLLRVSHRRWPYGSDGCQAHGFQGFVTALASICSSAAIAWGRYHHYCTRSQAWNSAVSLVLFVW  
 LSSAFWAALPLLGWHYDYEPLGTCCTLDYSGDRNFTSFLFTMSFFNFAMPLFITITSYSLMEQKLGKS  
 GHLQVNTTLPARTLLLWGPYAILYLYAVIADVTSISPKLQMPALIAKMVPTINAINYALGNEMVCRGI  
 WQCLSPQKREKDRTK

TRTRPLE - GFP Tag - V

**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](#)

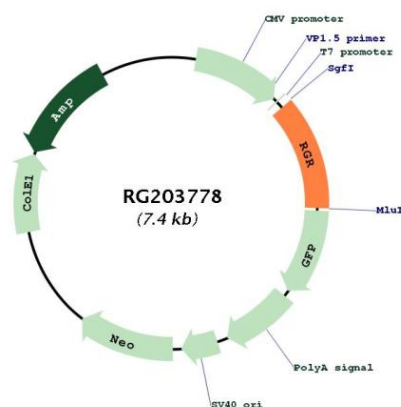
**Cytogenetics:** 10q23.1

**Domains:** 7tm\_1

**Protein Families:** Druggable Genome, GPCR, Transmembrane

**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 RG203778

