

## Product datasheet for **RG220771**

### RGR (NM\_001012720) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	RGR (NM_001012720) 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:	>RG220771 representing NM_001012720 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCAGAGACCAGTGCCTGCCACTGGCTTCGGGGAGCTCGAGGTGCTGGCTGTGGGGATGGTGCTAC  
TGGTGGAAGCTCTCTCCGGTCTCAGCCTCAATACCCTGACCATCTTCTTTCTGCAAGACCCCGGAGCT  
GCGGACTCCCTGCCACCTACTGGTGCTGAGCTTGGCTCTTGGGACAGTGGGATCAGCCTGAATGCCCTC  
GTTGCAGCCACATCCAGCCTTCTCCGGCGCTGGCCCTACGGCTCGGACGGCTGCCAGGCTCACGGCTTCC  
AGGGCTTTGTGACAGCGTTGGCCAGCATCTGCAGCAGTGCAGCCATCGCATGGGGCGTTATCACCCTA  
CTGCACCCGTAGCCAGCTGGCCTGGAACCTCAGCGTCTCTCTGGTGTCTTCGTGTGGCTGTCTTCTGCC  
TTCTGGGCAGCTCTGCCCTTCTGGGTTGGGTCACTACGACTATGAGCCACTGGGGACATGCTGCACCC  
TGGACTACTCCAAGGGGACAGAACTTACCAGCTTCTCTTACCATGTCTTCTTCAACTTCGCCAT  
GCCCCTTTATCAGCATCACTTCTACAGTCTCATGGAGCAGAACTGGGGAAGAGTGGCCATCTCCAG  
GTAACACCACCTGCGCAGCAAGGACGCTGCTGCTCGGCTGGGGCCCTATGCCATCCTGTATCTATACG  
CAGTCATCGCAGACGTGACTTCCATCTCCCCAACTGCAGATGGTGGCCGCCCTATTGCCAAAATGGT  
GCCCACGATCAATGCCATCAACTATGCCCTGGGCAATGAGATGGTCTGCAGGGGAATCTGGCAGTGCCTC  
TCACCGCAGAAGAGGGAGAAGGACCGAACCAAG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG220771 representing NM\_001012720  
Red=Cloning site Green=Tags(s)

MAETSALPTGFGELEVLAVGMVLLVEALSGLSLNTLTIFSFCKTPELRTPCHLLVLSLALADSGISLNAL  
 VAATSSLLRRWPYSGDGCQAHGFQGFVTALASICSSAAIAWGRYHHYCTRSQALWNSAVSLVLFVWLSSA  
 FWAALPLLGWGHYDYELGTCCCLDYSGDRNFTSFLFTMSFFNFAMPLFITITSYSLMEQKLGKSGHLQ  
 VNTTLPARTLLLWGOPYAILLYAVIADVTSISPKLQMPALIAKMVPTINAINYALGNEMVCRGIWQCL  
 SPQKREKDRTK

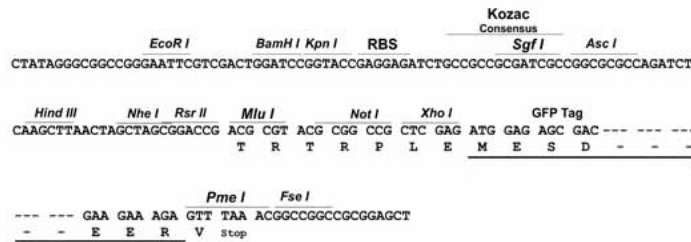
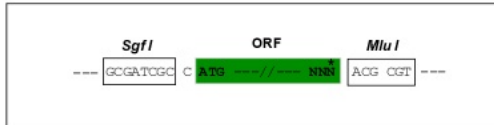
TRTRPLE - GFP Tag - V

**Restriction Sites:**

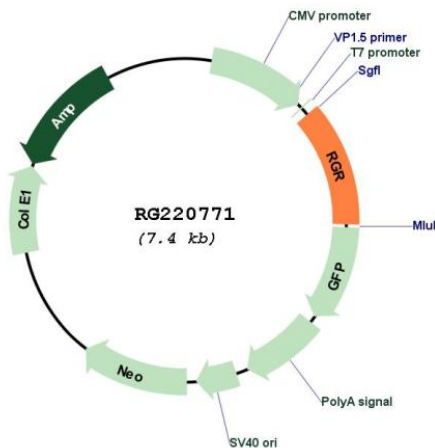
Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



**Plasmid Map:**



**ACCN:** NM\_001012720

**ORF Size:** 873 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001012720.2</a>
<b>RefSeq Size:</b>	1463 bp
<b>RefSeq ORF:</b>	876 bp
<b>Locus ID:</b>	5995
<b>UniProt ID:</b>	<a href="#">P47804</a>
<b>Cytogenetics:</b>	10q23.1
<b>Protein Families:</b>	Druggable Genome, GPCR, Transmembrane
<b>Gene Summary:</b>	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]