

## Product datasheet for **RG209820**

### Claudin 12 (CLDN12) (NM\_012129) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Claudin 12 (CLDN12) (NM\_012129) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Claudin 12  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG209820 representing NM\_012129  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGGCTGTGGGATGTCCACGCAGCCACAGTCCTTTCTTCTGTGTGGAATCGCCTCAGTAGCAGGCC  
 TCTTTCAGGGACTCTGCTTCCCAACTGGAGAAAATTACGATTGATCACATTCAACAGAAACGAGAAGAA  
 CCTGACTGTTTACACAGGCCTGTGGGTGAAATGTGCCCGGTATGACGGGAGCAGTGACTGCCTGATGTAC  
 GACTACTTGGTACTCATCAGTTGACCAGCTGGACCTGCGTGTCTCCAGTTTGCCTACCCCTCAGCA  
 TGCTGATCGCCATGGGTGCCCTGCTGCTGCTGATTGGAATGTGCAACTGCCTTCAGTCTCGGT  
 GCCAACATCAAAGTGGCCAAAGTCTGGTCAATAGTGCAGGTTGCCACCTGGTGGCTGGCTGCTATTT  
 TTCTGGCAGGACTGTGAGCCTCTCCCATCTATCTGGGTCATCTTTTATAACATCCATCTGAACAAGA  
 AGTTTGAGCCAGTCTTTTCATTTGACTATGCAGTGTATGTCACTATTGCTAGTGTGGGGCCTGTTTAT  
 GACTTCCCTTATACTATTTATTTGGTATTGTACATGCAAATCTTTCCTTCTCCTTTCTGGCAACCATTG  
 TACTCCCATCCACCCAGTATGCATACTTACTCACAGCCCTATTCAGCACGCTCTCGCCTCTCTGCCATTG  
 AAATTGACATTCCAGTAGTTTCACACCACT

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >RG209820 representing NM\_012129  
 Red=Cloning site Green=Tags(s)

MGCRDVHAATVLSFLCGIASVAGLFAAGTLLPNWRKLRLLITFNRNEKNLTVYTGLWVKCARYDGSSDCLMY  
 DTTWYSSVDQLDLRVLQFALPLSMLIAMGALLLCLIGMCNTAFRSSVPNIKLAACLKLVNSAGCHLVAGLLF  
 FLAGTVSLSPSIWVIFYNIHLNKKFEPVFSFDYAVYVVTIASAGGLFMTSLILFIWYCTCKSLPSPFWQPL  
 YSHPPSMHTYSQPYSARSRLSAIEIDIPVVSHTT

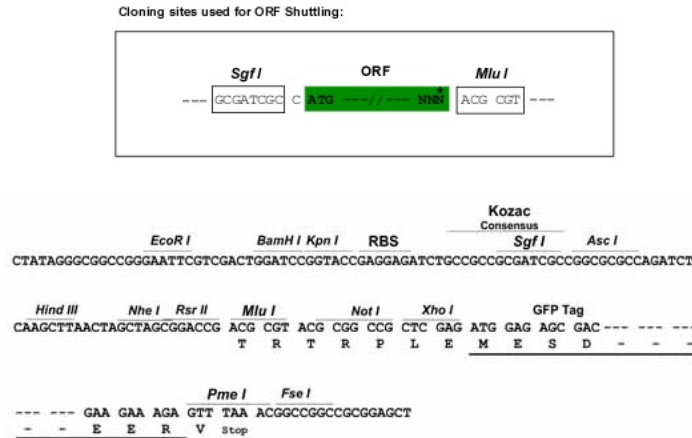
**TRTRPLE** - GFP Tag - V



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**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_012129

**ORF Size:** 732 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\\_012129.5](#)

**RefSeq Size:** 3493 bp

**RefSeq ORF:** 735 bp

**Locus ID:** 9069

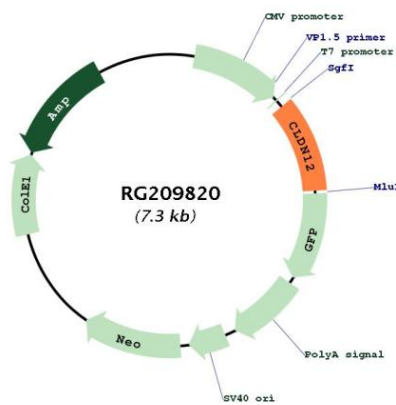
**UniProt ID:** [P56749](#)

**Cytogenetics:** 7q21.13

**Protein Families:** Transmembrane

**Gene Summary:** This gene encodes a member of the claudin family. Claudins are integral membrane proteins and components of tight junction strands. Tight junction strands serve as a physical barrier to prevent solutes and water from passing freely through the paracellular space between epithelial or endothelial cell sheets, and also play critical roles in maintaining cell polarity and signal transductions. This gene is expressed in the inner ear and bladder epithelium, and it is over-expressed in colorectal carcinomas. This protein and claudin 2 are critical for vitamin D-dependent Ca<sup>2+</sup> absorption between enterocytes. Multiple alternatively spliced transcript variants encoding the same protein have been found.[provided by RefSeq, Sep 2011]

**Product images:**



Circular map for RG209820