

## Product datasheet for **MG225961**

### Otol1 (NM\_001018031) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Otol1 (NM_001018031) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Otol1
Synonyms:	Gm414
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG225961 representing NM\_001018031  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGTGGATATTTTCTTCGCTTTGTGCTGTTTTAACTATTTTGGCTATGGATGATGTGCCACAGAAGCAA  
 AGACCACACCATACACCAATTTACGAAGAAATCTGAAGGAAAAGAGATGTTGAAGGGCTTAAAGCCGTC  
 CAGTGGCTTCTTTCTGGATGGAGAAGAAACCGTCCATACGAAACGGCTGCCATGGCAGAGCCCACCACC  
 GGCTCCCCTGCCTTGGCAATGGCTGAGTCCACCGCAGGCCCTCGGCCTCTGCCACAACCCGCTCCTTTC  
 CCTTCGAGAGCTTCTCTCGGACACAACGGTTTCGTTTTGAATTGCTGCCATTGTTGTTCAATTTGTAC  
 TGGGCAGAAAGGAGAACCCGAAAGATGGGAAAACAAGGCCCTAAAGGAGAGACTGGTGACTGGCAGC  
 CCAGGACACCCAGGAACCACTGGACCTCAAGTCCAAAGGCCAGAAAGGAGAGAAAGGACTAAAGGGAG  
 ACCGGGGGACCAAGGAGCAGGTGGCATTCCGGGGTACCCAGGAAAACCAGGAGAGCAAGGTGCACTTGG  
 TCCAAGGGAGATAAAGGAACCATCGGCCCGGCAGGAACGAAAGGACAAAAGGCTCTAAGGGAGAAGT  
 TGTGGGAATGGCACTAAAGGAGAGAAAGGGACCTGGGGCCTCTGGGGCCCATGGCTTCATTGGAGAGC  
 CTGGGGCAAGGGCGAGAAGGGTGGTGTGGGGAGAAAGGCTACCGAGGAGATTTGGGGAAAGGGGAGA  
 AAAGGGGCAGAAAGGCGAGAAAGGGATGGAGGGAGAGAAAGGTAGCAGAGGAGATGTTGGGTGAGAGGC  
 AAAAGGGGTTTCAAGTGTCTACCGGGCTCAGAGGCGATTCTGGTCTAAAGGAGAAAAAGGAGAGATAG  
 GTTCTCCTGGTTTACCGGACCTCGGGGACAAAGGGTGAAGTGGAAAGCAAGGTGTTTCGAGGGGCAAC  
 AGGGAAGAAGGGCTCTCGGGGTGCAAGGGTCCAAAGGCGAGGCCACACAAGTCCCACAGTCGGCTTTC  
 AGTGCCCTTTTATCCAAGCCCTCCCTCCCCAACGTTCCCATCAAGTTTGACAAGATTCTCTCTAATG  
 ACCAAGGGGATTACAGCCCGTCACTGGGAAATTTAACTGTAGTGTTCCTGGGACATACATATTTTCTTA  
 TCAATGTCAGTGTACAGGGTTCGACCTGCTCGGATCAGCCTCGTGGCCCGCAACAGGAAGCAGTTCAAATCC  
 AGAGAGACGCTCTATGGTCAAGTAGATCAGGCCTCCCTCCTCCTCATTCTGAAATTGAGTGCAGGAG  
 ATCAAGTGTGGCTGGAAGTGTCAAAGGACTGGAATGGGCTGTATGTCGGCCCGAGGATGACAGCATCTT  
 TAGTGGGTTCTTCTGTACCCAGAGGAACTTTTAGTAAGTACCA

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG225961 representing NM\_001018031  
 Red=Cloning site Green=Tags(s)

MWIFSSLCAVLILAMDDVATEAKTTPYTKFTKKSEGKEMLKGLKPSSGFFLDGEETVHTETAAMAEPPT  
 GSPALAMAESTAGPSASATTRLPLPFESFSLDTTGFVLCCHCCSFVTGQKGEPPKMGKQGPKEGDTGS  
 PGHPGTTGPQPKGQKGEKGLKGDQAGGIPGYPGKPEQALGPKGDKGTIGPAGTKGQKSGKEL  
 CGNGTKGEKGDPGASGAHGFIGEPGAKGEKGGVGEKGYRDLGERGEKQKGEKMEGEKGSRGDVGSEG  
 KRGSDDLPLRGDSGPKGEKGEIGSPGFTGPAGPKGELGSKGVRGPTGKKGSRGKGSKEATQVPQSAF  
 SALLSKPFPNVPVPIKFDKILSNDQGDYSPVTGKFNCSVPGTYIFS YHVTVRGRPARISLVARNRQFKS  
 RETLYGQVQDQASLLLILKLSAGDQVWLEVSKDWNGLYVGPEDDSIFSGFLLYPEETFSP

**TRTRPLE** – GFP Tag – V

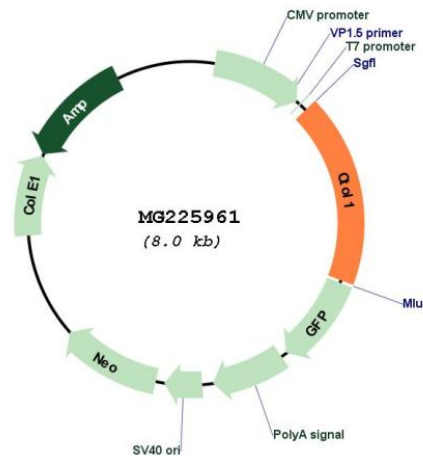
**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_001018031

ORF Size: 1446 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\\_001018031.2](#), [NP\\_001018041.2](#)

**RefSeq Size:** 2161 bp

**RefSeq ORF:** 1449 bp

**Locus ID:** 229389

**UniProt ID:** [Q4ZJM7](#)

**Cytogenetics:** 3 E2

**Gene Summary:** Collagen-like protein specifically expressed in the inner ear, which provides an organic scaffold for otoconia, a calcium carbonate structure in the saccule and utricle of the ear (PubMed:21655225, PubMed:24748133, PubMed:29076638). Acts as a scaffold for biomineralization: sequesters calcium and forms interconnecting fibrils between otoconia that are incorporated into the calcium crystal structure (PubMed:21655225, PubMed:24748133, PubMed:29076638). Together with OC90, modulates calcite crystal morphology and growth kinetics (PubMed:24748133).[UniProtKB/Swiss-Prot Function]