

Product datasheet for **MG219221**

Otop1 (NM_172709) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Otop1 (NM_172709) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Otop1
Synonyms:	A530025J20Rik; Otp1; tlt
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG219221 representing NM_172709
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCCTGGGGGCCGGGGCGCCCTCTTCTCCCGCAGCATCCTCAGGCTCCTCGCGTGCCGCGCCGTGCG
 GGATCGCGGCATGCCCTCTGTCCCACCTCCCCTAGCCGAGGGTCTCCACAAGCTTCCGGTCCCCGGCG
 CGGCGCCAGCGTCCCGCAGAAGCTGGCGGAGACTCTGAGCAGCCAGTATGGACTGAACGTGTTCTGTGGCG
 GGGCTGCTGTTCTGTGGCTGGGCGGTGCACGCGACGGGTGTGGGCAAGAGCGACCTGCTGTGCGTTC
 TAACCGCGCTTATGCTGCTGCAGCTGCTCTGGATGCTGTGGTACGTGGTTCGAGCTACATGCAGCGCCG
 CCTCATCCGCCCCAAGGACACGCACGCGGGTGCAGCTGGCTTCGCGGAAGCATCACGTTGTTCCGCTTT
 ATCACTGTCGCTGGGATGCTTAAAGTCGCATACTTCATTGGATTCTCGGAGTCTTGCAGCCACCG
 AGGGAGTTTTCCAGTACCCATGCAGTGCATACCCTATTGCAGGTGATTTCTCTGGGCCATGCTAA
 GGATATCATCATGTCTTTCAAAACTGAAAAGTTTGGGGTATCCATTCACTGTTTACGAACTCCTA
 CTGTGGGCCAACAGCGTCTGAATGAATCAAAGCACCAGCTGAATGAGCACAAGGAACGGCTGATCACTC
 TGGGCTTTGGCAACATCACCATCGTTTTGGATGACCACACACCACAGTGAACGACACACCCGCCCT
 CTGCTCTGCCCTCTCCATGGGATTTACTATCTGTACCCCTTCAACATTGAGTACCAGATCCTGGCCTCG
 ACCATGCTCTACGTGCTGTGGAAGAATCGGGCGCAGAGTGGACAGCTCCCAGCACCAGAAGATGCAGT
 GCAGATTGCAGCGGGTCTAGTGGGCTCCGTGCTGGGCTTGACAGTGTGGCTGCCACCATCGCCGTGGT
 TGTGGTGTACATGATCCACATCGGGCGCTCAAATCCAAGAGCGAGTCCGCTCTCATCATGTTCTATTTG
 TACGCTATCACGGTGTCTGCTTATGGGGCCGCAAGCTGGATGTTGACCTGTTGGTGCCACCCGCTC
 CGGCTCTGGCTCCTCTCCTGGGGCTCCATTCTGGCCATCGCCTGTGCTGAGACTCGCCACCGTACACC
 TGGTACAACCTGCCCTACTCGGTCTGGTATCGTGGAGAAGTATGTCCAAAACATTTTCATCATCGAGT
 CCGTGCACCTCGAGCCTGAGGGGTCCCGGAGGATGTGCGCACTCTGCGTGTGGTACCCTCTGCAGCAG
 CGAGGCTGCCGACTGGCTGCATCCACTCTCGGGAGCCAGGGATGGCCAGGATGGGTACCTGCTGTC
 AATGGAATCTGTGCTGCAGCAGAGGTGTGGAAAGAGGACCAGGAGTCTGGCTGGGAAGGAGCTACGG
 GGACAACCCGATGCTGGACTTCTTTCAGGGCGGCATGAAGAGGAGGCTTCTCAGAAACATCACGGCCTT
 TCTGTTTCTTGAACATCTCGCTTTGGATTCCCCTGCCTTTGGCTGCCGTCCCGAGTATGACAACGGA
 TTGGAGGAAATTGCTTTGGCTTTGAACCTGGATAATTGTGGTCAACCTGGCCATGCCCTTTCCATT
 TCTACCGATGCACGCAGCTGCTGCCCTTTGAGGTCTATTGTAAGATC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG219221 representing NM_172709
 Red=Cloning site Green=Tags(s)

MPGGPAPSSPAASSGSSRAAPSGIAACPLSPPPLARGSPQASGPRRGASVPQKLAETLSSQYGLNVFVA
 GLLFLLAWAVHATGVGKSDLLCVLTALMLLQLLWMLWYVGRSYMQRRLIRPKDTHAGARWLRGSITLFAF
 ITVVLGCLKVAYFIGFSECLSAIEGVFPVTHAVHTLLQVYFLWGHAKDIIMSFKTLERFGVIHVSFTNLL
 LWANSVLNESKHQLNEHKERLITLFGNITIVLDDHTPQCNCPPALCSALSHGIYYLYPFNIEYQILAS
 TMLYVLWKNIGRRVDSSQHQMQRFDGLVGSVGLGLTVLAATIAVVVVYMIHIGRSKSKSESALIMFYL
 YAITVLLL MGAAGLVGSIYRVDEKSLDESKNPARKLDVDLLVATGSGSWLLSWGSILAIACAETRPPYT
 WYNLPYSVLVIVEKYVQIFIIIESVHLEPEGVPEVVRTLRVVTVCSEAAALAASTLGSQMAQDQSPAV
 NGNLCLQQRCKEDQESGWEGATGTRCLDFLQGMKRLLRNITAFRLFCLNISLWIPPAFGCRPEYDNG
 LEEIVFGFEPWIIVVNLAMPFSIFYRMHAAAALFEVYCKI

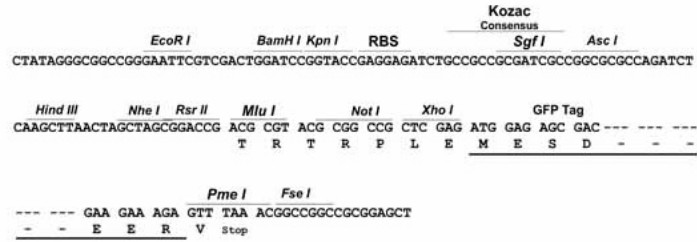
TRTRPLE - GFP Tag - V

Restriction Sites:

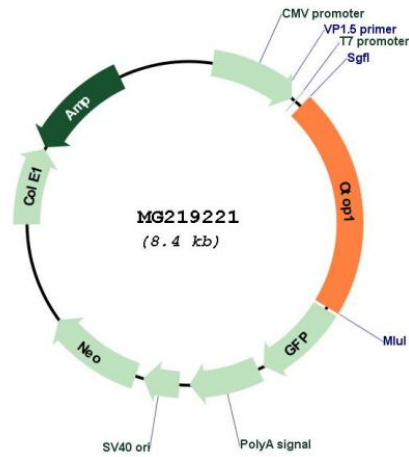
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_172709

ORF Size: 1800 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:	<ol style="list-style-type: none">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_172709.3 , NP_766297.2
RefSeq Size:	3171 bp
RefSeq ORF:	1803 bp
Locus ID:	21906
UniProt ID:	Q80VM9
Cytogenetics:	5 20.35 cM
Gene Summary:	Proton-selective channel that specifically transports protons into cells (PubMed:29371428). Proton channel activity is only weakly-sensitive to voltage (PubMed:29371428). Proton-selective channel activity is probably required in cell types that use changes in intracellular pH for cell signaling or to regulate biochemical or developmental processes (PubMed:29371428). In the vestibular system of the inner ear, required for the formation and function of otoconia, which are calcium carbonate crystals that sense gravity and acceleration (PubMed:12651873). Probably acts by maintaining the pH appropriate for formation of otoconia (PubMed:29371428). Regulates purinergic control of intracellular calcium in vestibular supporting cells (PubMed:17606897, PubMed:20554841). May be involved in sour taste perception in sour taste cells by mediating entry of protons within the cytosol (PubMed:29371428). Also involved in energy metabolism, by reducing adipose tissue inflammation and protecting from obesity-induced metabolic dysfunction (PubMed:24379350).[UniProtKB/Swiss-Prot Function]