

## Product datasheet for **MC219521**

### Otop1 (NM\_172709) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Otop1 (NM_172709) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Otop1
Synonyms:	A530025J20Rik; Otp1; tlt
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >MC219521 representing NM\_172709  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCCTGGGGGCCGGGGCGCCCTCTTCTCCCGCAGCATCCTCAGGCTCCTCGCGTGCCGCGCCGTGCGG  
 GGATCGCGGCATGCCCTCTGTCCCACCTCCCCTAGCCGAGGGTCTCCACAAGCTTCCGGTCCCCGGCG  
 CGGCGCCAGCGTCCCGCAGAAGCTGGCGGAGACTCTGAGCAGCCAGTATGGACTGAACGTGTTCTGTGGCG  
 GGGCTGTGTTCTGTGGCTGGGCGGTGCACGCGACGGGTGTGGGCAAGAGCGACCTGCTGTGCGTTT  
 TAACCGCGCTTATGCTGCTGCAGCTGCTCTGGATGCTGTGGTACGTGGTGCAGCTACATGCAGCGCCG  
 CCTCATCCGCCCAAGGACACGCACGCGGGTGCAGCTGGCTTCGCGGAAGCATCACGTTGTTGCGGTTT  
 ATCACTGTCGCTGGGATGCTTAAAGTCGATACTTCATTGGATTCTCGGAGTCTTGCAGCCACCG  
 AGGGAGTTTTCCAGTACCCATGCAGTGCATACCCTATTGCAGGTGATTTCTCTGGGCCATGCTAA  
 GGATATCATCATGTCTTTCAAAACTGGAAAGTTTGGGGTATCCATTAGTGTTCACGAACCTCCTA  
 CTGTGGGCCAACAGCGTCTGAATGAATCAAAGCACAGCTGAATGAGCACAAGGAACGGCTGATCACTC  
 TGGGCTTTGGCAACATCACCATCGTTTTGGATGACCACACACCACAGTGAACCTGCACACCACCCGCCCT  
 CTGCTCTGCCCTCTCCATGGGATTTACTATCTGTACCCCTTCAACATTGAGTACCAGATCCTGGCCTCG  
 ACCATGCTCTACGTGCTGTGGAAGAACATCGGGCGCAGAGTGGACAGCTCCCAGCACCAAGATGCAGT  
 GCAGATTGACAGGGGCTCTAGTGGGCTCCGTGCTGGGCTTGACAGTGTGGCTGCCACCATCGCCGTGGT  
 TGTGGTGTACATGATCCACATCGGGCGCTCAAATCCAAGAGCGAGTCCGCTCTCATCATGTTCTATTTG  
 TACGCTATCACGGTGTGCTGCTTATGGGGCCGACGGCTAGTCGGAAGCTGGATTTACAGGGTGGATG  
 AGAAGTCTCTGGATGAGTCAAAGAACCAGCGCGCAAGCTGGATGTTGACCTGTTGGTGGCCACCGGCTC  
 CGGCTCCTGGCTCCTCTCCTGGGCTCCATTCTGGCCATCGCCTGTGCTGAGACTCGCCACCGTACACC  
 TGGTACAACCTGCCCTACTCGGTCTGGTATCGTGGAGAAGTATGTCCAAAACATTTTCATCATCGAGT  
 CCGTGCACCTCGAGCCTGAGGGGTCGGGAGGATGTGCGCACTCTGCGTGTGGTACCCTCTGCAGCAG  
 CGAGGCTGCCGACTGGCTGCATCCACTCTCGGGAGCCAGGGATGGCCAGGATGGGTACCTGCTGTC  
 AATGGAAATCTGTGCTGCAGCAGAGGTGTGGAAAGAGGACCAGGAGTCTGGCTGGGAAGGAGCTACGG  
 GGACAACCGATGCTGGACTTCCTTCAGGGCGGCATGAAGAGGAGGCTTCTCAGAAACATCACGGCCTT  
 TCTGTTTTCTTGAACATCTCGCTTTGGATTCCCCTGCCTTTGGCTGCCGTCCCGAGTATGACAACGGA  
 TTGGAGGAAATTGCTTTGGCTTTGAACCTGGATAATTGTGGTCAACCTGGCCATGCCCTTTCCATT  
 TCTACCGATGCACGAGCTGCTGCCCTTTGAGGTCTATTGTAAGATC**TAG**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM\_172709
- Insert Size:** 1803 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- 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).

<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_172709.3</a> , <a href="#">NP_766297.2</a>
<b>RefSeq Size:</b>	3171 bp
<b>RefSeq ORF:</b>	1803 bp
<b>Locus ID:</b>	21906
<b>UniProt ID:</b>	<a href="#">Q80VM9</a>
<b>Cytogenetics:</b>	5 20.35 cM
<b>Gene Summary:</b>	<p>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]</p>