

## Product datasheet for **MC227903**

### **Slc26a5 (NM\_001289788) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Slc26a5 (NM_001289788) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Slc26a5
Synonyms:	Pres; prestin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >MC227903 representing NM\_001289788  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGTTTTTGGTTTGGCTGTTGGGTGGCAAGGAATTTAATGAGAGATTTAAAGAGAAATTGCCAGCACCCA  
 TTCCTCTAGAGTTCTTTGCTGTGGTGATGGGGACTGGCATTCTGCAGGATTTAACCTACATGAGTCCTA  
 CAGTGTGGATGTCGTTGGAACACTTCTCTGGGGCTACTTCTCCGGCCAACCCAGACACCAGCCTGTTT  
 CACCTGGTGTATGTGGACGCCATTGCCATCGCCATCGTTGGATTTTTCAGTGACGATCTCCATGGCCAAAA  
 CCTTGGCAAATAAGCATGGCTACCAGGTTGATGGCAATCAGGAGCTCATTGCCTTGGGGATGCAACTC  
 CATTGGATCTCTTCCAAACCTTCTCGATTTCTGCTCCTTGTCTCGAAGCCTTGTTCAGGAAGGAACT  
 GGAGGGAAACACAGCTTGCAGGTTGTTTGGCCTCGTTGATGATTCTGTTGGTCAATTAGCCACCGGAT  
 TCCTCTTTGAGTCGTTACCCAGGCTGCTCTTCCGCCATTGTGATCGTCAACCTGAAAGGAATGTTTCA  
 GCAGTTCTCAGACCTGCCTTTTTTCTGGAGAACCAGCAAATAGAGCTGACCATCTGGCTGACCACCTTT  
 GTGTCCTCCCTGTTCTCGGCTTGGACTACGGACTGATTACCGCCGTGATCATTGCTCTGCTCACAGTGA  
 TTTATAGAACACAGAGTCCAAGCTACAAAGTCTGGGGCAGCTCCCTGACACGGATGTGTACATTGACAT  
 AGATGCATATGAGGAGGTGAAAGAAATTCCTGGAATAAAAATATTCCAAATAAATGCCCAATTTACTAT  
 GCAAATAGCGACTTGTATAGCAGCGCTTAAAAAGAAAGACTGGAGTAAACCCAGCACTCATTATGGGAG  
 CGAGAAGAAAGGCCATGAGGAAGTACGCCAAGGAAGTTGGAAATGCCAACGTGGCCAATGCTACTGTTGT  
 CAAAGTGGATGCAGAAGTAGACGGAGAAAATGCTACAAAACCTGAAGAAGAGGATGATGAAGTCAAATTT  
 CCCCCAATAGTCATCAAAACAACATTTCTGAAGAGCTGCAGAGATTTTGGCCCCAGGGGAAAAATGTCC  
 AACTGTCACTTAGACTTTACGCAGGTCATTTTGTGGATTCTGTTGGAGTGAAAACTGGCCGGGAT  
 TGTGAAAGAATATGGAGATGTTGGAATTTATGTATATTTAGCAGGATGCAGCCCACAAGTTGTGAATGAC  
 CTCACCCGCAACAACATTTTTGAAAATCCTGCCTTGAAGAGCTTCTGTTCCACAGTATCCACGATGCAG  
 TCCTGGGCAGCCAAGTTCGGGAGGCAATGGCTGAACAAGAAGCCACAGCGTCACTTCCCCAGGAGGATAT  
 GGAGCCAATGCCACACCACCCCGAGGCA**TAA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** Sgfl-MluI
- ACCN:** NM\_001289788
- Insert Size:** 1437 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).
- OTI Annotation:** Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
- 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\\_001289788.1](#), [NP\\_001276717.1](#)

**RefSeq Size:** 4378 bp

**RefSeq ORF:** 1437 bp

**Locus ID:** 80979

**UniProt ID:** [Q99NH7](#)

**Cytogenetics:** 5 9.97 cM

**Gene Summary:** Motor protein that converts auditory stimuli to length changes in outer hair cells and mediates sound amplification in the mammalian hearing organ. Prestin is a bidirectional voltage-to-force converter, it can operate at microsecond rates. It uses cytoplasmic anions as extrinsic voltage sensors, probably chloride and bicarbonate. After binding to a site with millimolar affinity, these anions are translocated across the membrane in response to changes in the transmembrane voltage. They move towards the extracellular surface following hyperpolarization, and towards the cytoplasmic side in response to depolarization. As a consequence, this translocation triggers conformational changes in the protein that ultimately alter its surface area in the plane of the plasma membrane. The area decreases when the anion is near the cytoplasmic face of the membrane (short state), and increases when the ion has crossed the membrane to the outer surface (long state). So, it acts as an incomplete transporter. It swings anions across the membrane, but does not allow these anions to dissociate and escape to the extracellular space. Salicylate, an inhibitor of outer hair cell motility, acts as competitive antagonist at the prestin anion-binding site (By similarity). [UniProtKB/Swiss-Prot Function]

**Transcript Variant:** This variant (3) differs in the 5' UTR, lacks a portion of the 5' coding region and initiates translation at a downstream start codon, compared to variant 1. It encodes isoform 3, which is shorter at the N-terminus, compared to isoform 1. **Sequence Note:** This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.