

## Product datasheet for MC229711

### Myo7a (NM\_001256083) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Myo7a (NM\_001256083) Mouse Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Myo7a  
**Synonyms:** Hdb; Myo7; nfm371; polka; sh-1; sh1; USH1B  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >MC229711 representing NM\_001256083  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

ATGGACCTGAAGTCAGGCCAGGAGTTTGTATGTGCCCATCGGGCCGTGGTGAAGCTCTGCGACTCGGGCC  
 AGATCCAGGTGGTGGATGATGAAGACAATGAACACTGGATATCCCCTCAGAATGCCACGCACATCAAGCC  
 AATGCACCCACATCGGTGCACGGCGTGGAGGACATGATCCGCCCTGGGGGATCTCAACGAGGCAGGCATC  
 CTCGAAACCTTCTCATTTCGCTACCGGGACCACCTCATCTATACGTACACAGTTCCATCCTGGTGGCCG  
 TGAACCCCTACCAGCTGCTCTCCATCTACTCGCCAGAGCAGCATCCGCCAGTACACCAACAAGAAGATAGG  
 GGAGATGCCCCCAGATCTTCGCCATTGCTGACAACCTGCTACTTCAACATGAAACGCAACAACCCGGAC  
 CAGTGTGTATTATCAGCGGGGAGTCCGGAGCTGGCAAGACAGAGAGCACAAGTTGATCCTGCAGTTCC  
 TGGCAGCCATCAGTGGACAGCACTCATGGATCGAGCAGCAGGTGCTGGAGGCCACCCCGATCCTGGAAGC  
 ATTTGGGAACGCCAAGACCATCCGCAACGACAACCTAGCCGCTTTGGCAAGTACATTGACATCCACTTT  
 AACAGCGTGGTCCATCGAGGGCGCCAAAATAGAGCAATACCTGCTGGAGAAGTACAGTGTCTGCCGCC  
 AGGCCCTGACGAGAGGAATATCACGTGTTCTACTGTATGCTGGAGGGCATGAATGAGGAGGAGAAGAA  
 GAACTGGGCCTAGGCCAGGCCGCTGACTACAACCTACTTGGCCATGGGTAACTGCATCACCTGTGAGGGC  
 CGCGTGGACAGTCAGGAGTATGCCAACATCCGCTCTGCCATGAAGTTCTCATGTTACAGACACGGAGA  
 ACTGGGAGATCTCGAAGCTTCTGGCTGCCATCCTACACATGGGCAATCTGCAGTATGAGGCCCGGACATT  
 TGAGAACTGGATGCGTGTGAAGTCTCTCTCCCATCGCTGGCCACGGCAGCTTCTCTGCTCGAGGTG  
 AACCCCCAGACCTGATGAGCTGCCTCACCAGCCGCACCCTCATACCCGTGGGGAGACGGTGTCCACCC  
 CTCTCAGCAGGGAACAGGCGCTGGATGTGCGAGATGCCTTTGTCAAGGGCATCTATGGGCGGCTCTTTGT  
 GTGGATTGTGGAGAAGATCAACGCAGCAATCTACAAGCCACCCCCCTGGAAGTGAAGAATCTCGCCGG  
 TCCATCGTCTCCTGGACATCTTTGGATTTGAGAACTTCACTGTGAACAGCTTCGAGCAGCTCTGCATTA  
 ACTTTGCCAATGAGCACCTGCAGCAATCTTCGTGCGGCACGTGTTCAAGCTGGAGCAGGAGGAGTACGA  
 CCTGGAGAGCATCGACTGGTTGCACATTGAGTTCACTGACAACCAGGAAGCACTGGACATGATTGCCAAC  
 CGGCCTATGAACGTCATCTCCCTCATCGATGAGGAGAGCAAGTTCCTCCCAAGGGCACGGATGCCACCATGC



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TGCATAAGCTGAACTCACAGCACAAAGCTCAATGCCAACTACGTGCCACCCAAGAACAGCCACGAGACCCA  
 GTTTGGAATCAACCACTTTGCGGGTGTGTCTATTATGAGAGTCAAGGCTTCTGGAGAAGAACCAGAC  
 ACCCTGCATGGGACATCATCCAGCTGGTCCACTTCCCAGAACAAAGTTCATAAAGCAGATTTTCCAAG  
 CTGACGTTGCCATGGGTGCCGAGACCAGGAAGCGCTCGCTACACTCAGCAGCCAGTTCAAGCGGTCTCT  
 GGAGCTGCTGATGCGCACACTGGGCGCTGCCAGCCCTCTTTGTGCGTTGTATCAAACCAATGAGTTC  
 AAGAAGCCCATGCTCTTCGACCCGGCACTGTGTGTACGCCAGCTGCGATATTCGGGCATGATGGAGACAA  
 TCCGCATCCGCCACGCAAGGCTACCCATTCGCTACAGCTTTGTGGAGTTGTGGAGCCTACCCGGTACT  
 GCTGCCTGGTGTGAAGCCAGCATACAAGCAGGGTGACCTCCGAGGGACATGCCAGCGCATGGCTGAGGCT  
 GTGCTGGGCACGCACGATGACTGGCAGATTGGCAAACCAAGATCTTTCTGAAGGACCACCATGACATGT  
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 CAAAGACAGGTCCAACCTCCTGAGACTGAAGAGTGTGCCACACTGATCCAGAGGCACTGGCGGGCCAC  
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 GGTGCGCAAGGCCTTCCGCCACCGCTCTGGCCGTGATCACCCTGCAGGCCATGCCAGGCATGATT  
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 CAGAGGAGGAGAACTCCGAAAGGAGATGAGTGCCAAGAAGGCCAAAGAGGAGGCTGAGCGCAAGCATCA  
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 GGACCTAGAGCGCGGACGGAGGGAGATGGTGGAAGAGGATGTTGACGCTGCCCTGCCCTGCCTGATGAA  
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 GCTGGCTGTCTGGATCACCATCCTCCGTTTCATGGGGACCTCCAGAGCCCAAGTACCACACAGCTGATG  
 AGCGACGGCAGTGAGAAGATCCCAGTGACTAAGATCTACGAGACCCTAGGCAAGAAGACATATAAGA  
 GGGAGCTGCAGGCCTTGCAGGGCGAGGGCAGACCAGCTCCCTGAGGGGCAAGAAGACCAGTGTGAG  
 ACACAAGTTGGTACACTTGACACTGAAGAAAAAGTCCAAACTCACAGAAGAGGTGACCAAGAGGCTGAAC  
 GATGGGAATCCACGGTACAGGGCAACAGCATGCTGGAGGATCGGCCACCTCAAATCTAGAGAAGCTGC  
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 GCTCACACACAACCCATCCAAGAGCAGCTATGCCAGGGGCTGGATCCTCGTGTGCTCTGTGTGGGCTGC  
 TTCGCCCCCTCTGAGAAGTTCGTTAAGTACCTGCGGAACCTCATCCAGGAGGCCACCTGGCTATGCTC  
 CTTACTGTGAGGAGCGCCTGAGGAGGACCTTTGTCAACGGAAGTTCGGACACAGCCACCCAGCTGGCTGGA  
 GCTGCAGGCCACCAAGTCCAAGAAGCCCATCATGTTGCCCGTGACCTTCATGGATGGGACCACCAAGACC  
 CTGCTAACAGATTCAGCAACTACAGCCAGGGAGCTGTGCAATGCTCTGGCTGACAAGATCTCACTCAAGG  
 ACCGCTTTGGCTTCTCCCTCTACATCGCTCTGTTGATGAAAGTGTCTCCCTGGGCAGCGGCAGTGACCA  
 TGTGATGGATGCCATCTCTCAGTGTGAGCAGTACGCCAAGGAGCAGGGTGTCTCAGGAGCGCAACGCCCA  
 TGGAGGCTCTTCTTTAGAAAGGAGGCTTTCACACCCTGGCACAACCCCTCGGAGGACAACGTGGCCACGA  
 ACCTCATCTACCAGCAGGTGGTGCAGGAGTCAAGTTTGGGGAGTACAGGTGTGAGAAGGAGGACGACCT  
 GGCTGAGCTGGCTTCTCAGCAGTACTTTGTGACTATGGTCTGAGATGATTCTGGAGCGCCTGCTGAGC  
 CTCGTGCCCACTTACATCCCTGACCGTGAGATCACACCCTGAAGAATCTTGAGAAGTGGGCACAGCTGG  
 CCATTGCTGCCACAAGAAGGGAATTTATGCCAGAGGAGAACTGACTCCAGAAGGTCAAAGAGGATGT  
 GGTCAATTATGCCGTTTCAAGTGGCCCTTGTCTTCTCAGGTTTTACGAAGCTTACAATTTCTAGGC  
 CCTCCCCTCCCCAAGAGCGACGTATCGTGGTGTCAACTGGACGGGTGTGACTTCTGGACGAGCAGG  
 AGCAGGTGCTTCTGGAGCTGTCTTCCCAGAGATCATGGCTGTGTCCAGCAGTAGGGGAACAAAGATGAT  
 GGCCCCCAGCTTACCCTGGCCACCATCAAAGGAGATGAGTACACCTTACATCCAGCAATGCTGAGGAC  
 ATCCGTGACCTGGTGGTACCTTCTGGAGGGCTACGGAAGAGGTCTAAGTATGGTGGCACTGCAGG  
 ACAATCCTAACCTGCTGGTGGAGTCAAGGCTTCTCAGCTTCCCAAGGGAGACCTCATCATCTTGA  
 CCATGATACTGGTGGAGCAGGTATGAACCTCAGGCTGGGCCAACGGCATCAACGAGAGGACCAAGCAGCGC  
 GCGCACTTCCCCACTGACTGTGTATACGTATGCCCACTGTACCTTGCCACCAAGGGAGATTGTGGCCC  
 TGGTCACTATGACCCAGACCAGAGGCAGGATGTCGTCCGGCTCCTGCAGCTTCGCACAGCAGAGCCAGA  
 GGTGCGCGCAAGCCCTACACGCTAGAGGAGTTCTCTACGACTACTTACGGCCCCACCAAGCACACG  
 CTGAGCCGTGTCATGGTGTCCAAGGCCCGGTAAGGACAGGCTGTGGAGCCACACAGAGACCCCTCA  
 AGCAGGCCCTGCTCAAGAAGATCCTGGGCAGTGAAGAAGTCTCCAGGAAGCCTGCATGGCTTTGTAGC

TGTGCTCAAGTACATGGGCGACTACCCATCCAAGAGGATGCGATCCGTCAATGAGCTCACTGACCAGATC  
 TTTGAGTGGGCACTCAAGGCTGAGCCCCTCAAGGATGAGGCTACGTGCAGATCCTGAAGCAGCTGACTG  
 ACAATCACATCAGGTACAGCGAAGAGAGGGGCTGGGAAGTGTGTGGCTGTGCACGGGCTCTTCCC  
 CAGCAACATCCTCCTGCCTCATGTTTCAGCGTTTCTGCAGTCCCAGCAAGCACTGTCTCTTGCCATTGAC  
 TGCTGCAGAGGCTCCAGAAAGCCCTGAGAAATGGCTCCCGGAAGTACCCTCCGCACCTGGTGGAGGTG  
 AGGCCATCCAACATAAGACTACCCAGATCTTCCACAAGGTCTACTTCCCCGATGACACGGACGAGGCTTT  
 TGAGGTGGAGTCCAGCACCAAGGCCAAGGACTTCTGCCAGAACATCGCCAGCCGGCTGTGCTCAAGTCT  
 TCCGAGGATTACAGCCTTTTGTCAAATCGCAGATAAGGTCATCAGCGTCCCAGAGAATGATTTCTTCT  
 TTGACTTTGTCCGACACCTGACAGACTGGATAAAGAAAGCACGGCCATCAAGGACGGAATCGTGCCTC  
 ACTAACCTACCAGGTGTTCTTTCATGAAGAAGCTGTGGACCACCACAGTCCCGGGCAAGGACCCCATGGT  
 GACTCCATCTTCCACTATTACCAGGAACTGCCAAATATCTCCGAGGCTACCACAAGTGCACCCGGGAGG  
 AGGTGCTGCAGCTGGGCGCACTCATCTACAGGGTCAAGTTTGGAGGAGACAAATCCTACTTCCCTAGCAT  
 CCCAAGTTGCTGAGGGAGCTGGTACCCAGGACCTAATCCGGCAGGTCTCACCTGATGACTGGAACGG  
 TCTATTGTGCCTACTTCAACAAACATGCGGGGAAGTCCAAGGAGGAAGCAAGCTGGCCTTCTCAAAC  
 TCATCTTCAAGTGGCCACCTTTGGCTCAGCCTTCTTTGAGGTGAAGCAAACACTACAGAACCAAACCTCCC  
 AGAGATTCTTAAATTGCCATCAACAAGTACGGGGTACGCTCATCGATCCCAGAACCAAGGACATCCTG  
 ACTACTACCCCTTACCAAGATCTCCAAGTGGAGTAGTGGCAACACCTACTTCCACATCACCATTGGGA  
 ACTTGGTCCGTGGGAGCAAACCTGCTCTGTGAGACATCGCTGGGATACAAATGGATGATCTTCTGACTTC  
 CTACATCAGCCAGATGCTCACAGCCATGAGCAAGCAGAGGAAGTCCAGGAGTGGAAAGTGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:**

Sgfl-Mlul

**ACCN:**

NM\_001256083

**Insert Size:**

6501 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\\_001256083.1](#), [NP\\_001243012.1](#)

**RefSeq Size:**

7196 bp

**RefSeq ORF:**

6501 bp

Locus ID: 17921  
UniProt ID: [P97479](#)

Cytogenetics: 7 53.57 cM

**Gene Summary:** Myosins are actin-based motor molecules with ATPase activity. Unconventional myosins serve in intracellular movements. Their highly divergent tails bind to membranous compartments, which are then moved relative to actin filaments. In the retina, plays an important role in the renewal of the outer photoreceptor disks. Plays an important role in the distribution and migration of retinal pigment epithelial (RPE) melanosomes and phagosomes, and in the regulation of opsin transport in retinal photoreceptors. Mediates intracellular transport of RPE65 in the retina pigment epithelium. In the inner ear, plays an important role in differentiation, morphogenesis and organization of cochlear hair cell bundles. Motor protein that is a part of the functional network formed by USH1C, USH1G, CDH23 and MYO7A that mediates mechanotransduction in cochlear hair cells. Required for normal hearing. Involved in hair-cell vesicle trafficking of aminoglycosides, which are known to induce ototoxicity. [UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (4) has multiple differences, compared to variant 1. These differences result in a distinct 5' UTR and cause translation initiation at a downstream start codon, compared to variant 1. The resulting isoform (4) is shorter than 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.