

## Product datasheet for MR231922

### Myo7a (NM\_001256083) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Myo7a (NM\_001256083) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Myo7a  
**Synonyms:** Hdb; Myo7; nmf371; polka; sh-1; sh1; USH1B  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >MR231922 representing NM\_001256083  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGACCTGAAGTCAGGCCAGGAGTTTGTATGTGCCATCGGGCCGTGGTGAAGCTCTGCGACTCGGGCC  
 AGATCCAGGTGGTGGATGATGAAGACAATGAACACTGGATATCCCCTCAGAATGCCACGCACATCAAGCC  
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CGGCCTATGAACGTCATCTCCCTCATCGATGAGGAGAGCAAGTTCCTCCCAAGGGCACGGATGCCACCATGC  
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**Protein Sequence:** >MR231922 representing NM\_001256083  
 Red=Cloning site Green=Tags(s)

MDLKSGQEFDVPIGAVVKLCDSGQIQVVDDEDNEHWISPNATHIKPMHPTSVHGVEDMIRLGDLNEAGI  
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 RVDSQEYANIRSAMKVLMTDTENWEISKLLAAILHMGNLQYEARTFENLDACEVLFSPSLATAASLLEV  
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 DSIFHYQELPKYLRGYHKCTREEVLQ GALIYRVKFEEDKSYFPSIPKLLRELVPQDLIRQVSPDDWKR  
 SIVAYFNKHAGKSKEEAKLAFKLIFKWPTFGSAFFEVKQTTEPNFPEILLIAINKYGVSLIDPRTKDIL  
 TTHPFTKISNWSNGNTYFHITIGNLVRSKLLCETSLGYKMDLLTSYISQMLTAMSKQRNSRSGR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001256083

**ORF Size:** 6498 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\\_001256083.1](#), [NP\\_001243012.1](#)

**RefSeq Size:** 7196 bp

**RefSeq ORF:** 6501 bp

**Locus ID:** 17921

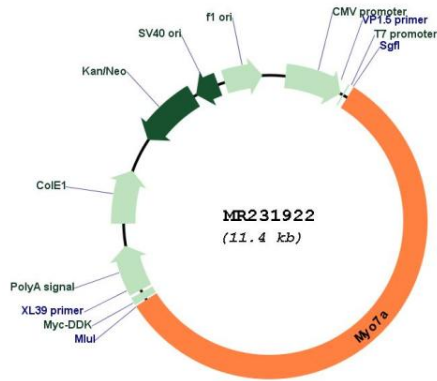
**UniProt ID:** [P97479](#)

**Cytogenetics:** 7 53.57 cM

**MW:** 250.2 kDa

**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]

**Product images:**



Circular map for MR231922