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Product datasheet for RC403208

MYO3A (NM_017433) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	MYO3A (NM_017433) Human Mutant ORF Clone
Mutation Description:	Y1042X
Affected Codon#:	1042
Affected NT#:	3126
Nucleotide Mutation:	MYO3A Mutant (Y1042X), Myc-DDK-tagged ORF clone of Homo sapiens myosin IIIA (MYO3A) as transfection-ready DNA
Effect:	Non-syndromic hearing loss
Symbol:	MYO3A
Synonyms:	DFNB30
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_017433
ORF Size:	3123 bp
Restriction Sites:	SgfI-MluI

ORF Nucleotide Sequence:

>RC403208 representing NM_017433
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTTTCCATTAATTGGAAAAACAATCATCTTTGATAACTTTCCTGATCCTTCTGATACATGGGAAATCA
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AGCAGTCAAAATTCTTGATCCAATTCACGATATTGACGAAGAGATTGAAGCAGAATATAACATCTTAAAA
GCACTTTCTGACCACCCTAATGTGGTCAGATTCTATGGGATATACTTTAAGAAGGATAAAGTAAATGGAG
ACAAGCTGTGGTTGGTTCTTGAGCTCTGCAGTGGAGGATCAGTGACTGACCTTGTGAAAGGATTTCTGAA
GAGGGGTGAAAGAATGAGTGAGCCTCTAATTGCCTATATTTTACATGAAGCACTAATGGGACTTCAACAT
TTGCATAACAACAAAACTATCCACAGAGATGTGAAAGGCAATAACATTCTATTGACCACGGAAGGTGGAG

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TGAAACTAGTAGATTTTGGTGTGTCTGCACAGCTCACCAGTACCCGGCACCGTCGGAACACATCCGTAGG
AACACCGTTTTGGATGGCTCCTGAGGTGATTGCATGTGAACAGCAATTGGATACCACTTATGACGCCAGA
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AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

>RC403208 representing NM_017433
Red=Cloning site Green=Tags(s)

MFPLIGKTIIFDNFPDPSDTWEITETIGKGTYGKVFKVLNKKNGQKAAVKILDPIHDIDEEIEAEYNILK
ALSDHPNVVRFYGIYFKKDKVNGDKLWLVLELCSGGSVTDLVKGFLKRGERMSEPLIAYILHEALMGLQH
LHNNKTIHRDVKGNNILLTTEGGVKLVDFGVSAQLTSTRHRRNTSVGTPFWMAPEVIACEQQLDTTYDAR
CDTWSLGITAIELGDGDPPLADLHPMRALFKIPRNPPPKLRQPELWSAEFNDFISKCLTKDYEKRPTVSE
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ATRHARETTNMKTQTVASYFRYSLMDLLSKMVVGQPHFVRCIKPNSERQARKYDKEKVLLQLRYTGILET
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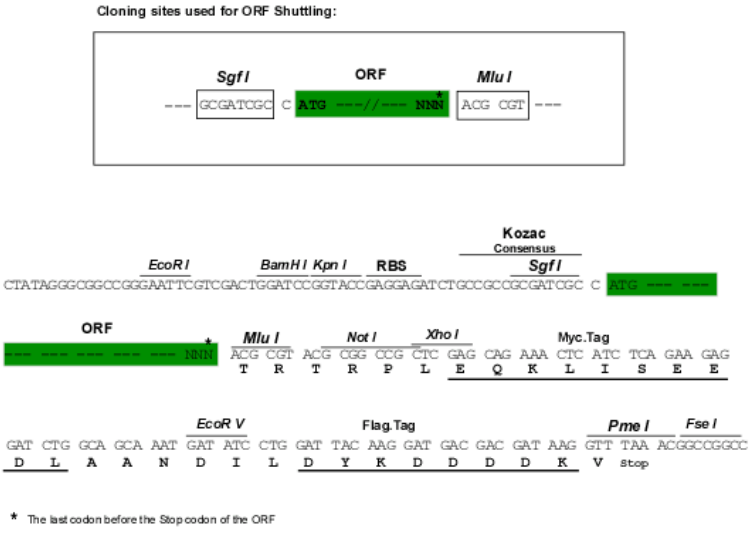
Restriction Sites: SgfI-MluI

Cloning Scheme:



OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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).

RefSeq: NP_059129

RefSeq Size: 3123 bp

RefSeq ORF: 4851 bp

Locus ID: 53904

Cytogenetics: 10p12.1

Protein Families: Druggable Genome, Protein Kinase

MW: 114.5 kDa

Gene Summary: The protein encoded by this gene belongs to the myosin superfamily. Myosins are actin-dependent motor proteins and are categorized into conventional myosins (class II) and unconventional myosins (classes I and III through XV) based on their variable C-terminal cargo-binding domains. Class III myosins, such as this one, have a kinase domain N-terminal to the conserved N-terminal motor domains and are expressed in photoreceptors. The protein encoded by this gene plays an important role in hearing in humans. Three different recessive, loss of function mutations in the encoded protein have been shown to cause nonsyndromic progressive hearing loss. Expression of this gene is highly restricted, with the strongest expression in retina and cochlea. [provided by RefSeq, Jul 2008]