OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RG221844

smooth muscle Myosin heavy chain 11 (MYH11) (NM_002474) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	smooth muscle Myosin heavy chain 11 (MYH11) (NM_002474) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MYH11
Synonyms:	AAT4; FAA4; SMHC; SMMHC; VSCM2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>RG221844 representing NM_002474
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGCAGAAGGGCCAACTCAGTGACGATGAGAAGTTCCTCTTTGTGGACAAAAACTTCATCAACAGCC
CAGTGGCCCAGGCTGACTGGGCCGCCAAGAGACTCGTCTGGGTCCCCTCGGAGAAGCAGGGCTTCGAGGC
AGCCAGCATTAAGGAGGAGAAGGGGGATGAGGTGGTTGTGGAGCTGGTGGAGAATGGCAAGAAGGTCACG
GTTGGGAAAGATGACATCCAGAAGATGAACCCACCCAAGTTCTCCAAGGTGGAGGACATGGCGGAGCTGA
CGTGCCTCAACGAAGCCTCCGTGCTACACAACCTGAGGGAGCGGTACTTCTCAGGGCTAATATATACGTA
CTCTGGCCTCTTCTGCGTGGTGGTCAACCCCTATAAACACCTGCCCATCTACTCGGAGAAGATCGTCGAC
ATGTACAAGGGCAAGAAGAGGCACGAGATGCCGCCTCACATCTACGCCATCGCAGACACGGCCTACCGGA
GCATGCTTCAAGATCGGGAGGACCAGTCCATTCTATGCACAGGCGAGTCTGGAGCCGGGAAAACCGAAAA
CACCAAGAAGGTCATTCAGTACCTGGCCGTGGTGGCCTCCTCCCACAAGGGCAAGAAAGACACAAGTATC
ACGGGAGAGCTGGAAAAGCAGCTTCTACAAGCAAACCCGATTCTGGAGGCTTTCGGCAACGCCAAAACAG
TGAAGAACGACAACTCCTCACGATTCGGCAAATTCATCCGCATCAACTTCGACGTCACGGGTTACATCGT
GGGAGCCAACATTGAGACCTATCTGCTAGAAAAATCACGGGCAATTCGCCAAGCCAGAGACGAGAGGACA
TTCCACATCTTTTACTACATGATTGCTGGAGCCAAGGAGAAGATGAGAAGTGACTTGCTTTTGGAGGGCT
TCAACAACTACACCTTCCTCTCCAATGGCTTTGTGCCCATCCCAGCAGCCCAGGATGATGAGATGTTCCA
GGAAACCGTGGAGGCCATGGCAATCATGGGTTTCAGCGAGGAGGAGCAGCTATCCATATTGAAGGTGGTA
TCATCGGTCCTGCAGCTTGGAAATATCGTCTTCAAGAAGGAAAGAAACACAGACCAGGCGTCCATGCCAG
ATAACACAGCTGCTCAGAAAGTTTGCCACCTCATGGGAATTAATGTGACAGATTTCACCAGATCCATCCT
CACTCCTCGTATCAAGGTTGGGCGAGATGTGGTACAGAAAGCTCAGACAAAAGAACAGGCTGACTTTGCT
GTAGAGGCTTTGGCCAAGGCAACATATGAGCGCCTTTTCCGCTGGATACTCACCCGCGTGAACAAAGCCC
TGGACAAGACCCATCGGCAAGGGGCTTCCTTCCTGGGGATCCTGGATATAGCTGGATTTGAGATCTTTGA
GGTGAACTCCTTCGAGCAGCTGTGCATCAACTACACCAACGAGAAGCTGCAGCAGCTCTTCAACCACACC

View online »

ATGTTCATCCTGGAGCAGGAGGAGTACCAGCGCGAGGGCATCGAGTGGAACTTCATCGACTTTGGGCTGG
ACCTACAGCCCTGCATCGAGCTCATCGAGCGACCGAACAACCCTCCAGGTGTGCTGGCCCTGCTGGACGA
GGAATGCTGGTTCCCCAAAGCCACGGACAAGTCTTTCGTGGAGAAGCTGTGCACGGAGCAGGGCAGCCAC
CCCAAGTTCCAGAAGCCCAAGCAGCTCAAGGACAAGACTGAGTTCTCCATCATCCATTATGCTGGGAAGG
TGGACTATAATGCGAGTGCCTGGCTGACCAAGAATATGGACCCGCTGAATGACAACGTGACTTCCCTGCT
CAATGCCTCCTCCGACAAGTTTGTGGCCGACCTGTGGAAGGACGTGGACCGCATCGTGGGCCTGGACCAG
ATGGCCAAGATGACGGAGAGCTCGCTGCCCAGCGCCTCCAAGACCAAGAAGGGCATGTTCCGCACAGTGG
GGCAGCTGTACAAGGAGCAGCTGGGCAAGCTGATGACCACGCTACGCAACACCACGCCCAACTTCGTGCG
CTGCATCATCCCCAACCACGAGAAGAGGTCCGGCAAGCTGGATGCGTTCCTGGTGCTGGAGCAGCTGCGG
TGCAATGGGGTGCTGGAAGGCATTCGCATCTGCCGGCAGGGCTTCCCCAACCGGATCGTCTTCCAGGAGT
TCCGCCAACGCTACGAGATCCTGGCGGCGAATGCCATCCCCAAAGGCTTCATGGACGGGAAGCAGGCCTG
CATTCTCATGATCAAAGCCCTGGAACTTGACCCCAACTTATACAGGATAGGGCAGAGCAAAATCTTCTTC
CGAACTGGCGTCCTGGCCCACCTAGAGGAGGAGCGAGATTTGAAGATCACCGATGTCATCATGGCCTTCC
AGGCGATGTGTCGTGGCTACTTGGCCAGAAAGGCTTTTGCCAAGAGGCAGCAGCAGCTGACCGCCATGAA
GGTGATTCAGAGGAACTGCGCCGCCTACCTCAAGCTGCGGAACTGGCAGTGGTGGAGGCTTTTCACCAAA
GTGAAGCCACTGCTGCAGGTGACACGGCAGGAGGAGGAGATGCAGGCCAAGGAGGATGAACTGCAGAAGA
CCAAGGAGCGGCAGCAGAAGGCAGAGAATGAGCTTAAGGAGCTGGAACAGAAGCACTCGCAGCTGACCGA
GGAGAAGAACCTGCTACAGGAACAGCTGCAGGCAGAGACAGAGCTGTATGCAGAGGCTGAGGAGATGCGG
GTGCGGCTGGCGGCCAAGAAGCAGGAGCTGGAGGAGATACTGCATGAGATGGAGGCCCGCCTGGAGGAGG
AGGAAGACAGGGGCCAGCAGCTACAGGCTGAAAGGAAGAAGATGGCCCAGCAGATGCTGGACCTTGAAGA
ACAGCTGGAGGAGGAGGAAGCTGCCAGGCAGAAGCTGCAACTTGAGAAGGTCACGGCTGAGGCCAAGATC
AAGAAACTGGAGGATGAGATCCTGGTCATGGATGATCAGAACAATAAACTATCAAAAGAACGAAAACTCC
TTGAGGAGAGGATTAGTGACTTAACGACAAATCTTGCAGAAGAGGAAGAAAAGGCCAAGAATCTTACCAA
GCTGAAAAACAAGCATGAATCTATGATTTCAGAACTGGAAGTGCGGCTAAAGAAGGAAGAGAAGAGCCGA
CAGGAGCTGGAGAAGCTGAAACGGAAGCTGGAGGGTGATGCCAGCGACTTCCACGAGCAGATCGCTGACC
TCCAGGCGCAGATCGCAGAGCTCAAGATGCAGCTGGCCAAGAAGGAGGAGGAGCTGCAGGCGGCCCTGGC
CAGGCTTGACGATGAAATCGCTCAGAAGAACAATGCCCTGAAGAAGATCCGGGAGCTGGAGGGCCACATC
TCAGACCTCCAGGAGGACCTGGACTCAGAGCGGGCCGCCAGGAACAAGGCTGAAAAGCAGAAGCGAGACC
TCGGCGAGGAGCTGGAGGCCCTAAAGACAGAGCTGGAAGACACACTGGACAGCACAGCCACTCAGCAGGA
GCTCAGGGCCAAGAGGGAGCAGGAGGTGACGGTGCTGAAGAAGGCCCTGGATGAAGAGACGCGGTCCCAT
GAGGCTCAGGTCCAGGAGATGAGGCAGAAACACGCACAGGCGGTGGAGGAGCTCACAGAGCAGCTTGAGC
AGTTCAAGAGGGCCAAGGCGAACCTAGACAAGAATAAGCAGACGCTGGAGAAAGAGAACGCAGACCTGGC
CGGGGAGCTGCGGGTCCTGGGCCAGGCCAAGCAGGAGGTGGAACATAAGAAGAAGAAGCTGGAGGCGCAG
GTGCAGGAGCTGCAGTCCAAGTGCAGCGATGGGGAGCGGGCCCGGGCGGAGCTCAATGACAAAGTCCACA
AGCTGCAGAATGAAGTTGAGAGCGTCACAGGGATGCTTAACGAGGCCGAGGGGAAGGCCATTAAGCTGGC
CAAGGACGTGGCGTCCCTCAGTTCCCAGCTCCAGGACACCCAGGAGCTGCTTCAAGAAGAAACCCGGCAG
AAGCTCAACGTGTCTACGAAGCTGCGCCAGCTGGAGGAGGAGCGGAACAGCCTGCAAGACCAGCTGGACG
AGGAGATGGAGGCCAAGCAGAACCTGGAGCGCCACATCTCCACTCTCAACATCCAGCTCTCCGACTCGAA
GAAGAAGCTGCAGGACTTTGCCAGCACCGTGGAAGCTCTGGAAGAGGGGAAGAAGAGGTTCCAGAAGGAG
ATCGAGAACCTCACCCAGCAGTACGAGGAGAAGGCGGCCGCTTATGATAAACTGGAAAAGACCAAGAACA
GGCTTCAGCAGGAGCTGGACGACCTGGTTGTTGATTTGGACAACCAGCGGCAACTCGTGTCCAACCTGGA
AAAGAAGCAGAGGAAATTTGATCAGTTGTTAGCCGAGGAGAAAAACATCTCTTCCAAATACGCGGATGAG
AGGGACAGAGCTGAGGCAGAAGCCAGGGAGAAGGAAACCAAGGCCCTGTCCCTGGCTCGGGCCCTTGAAG
AGGCCTTGGAAGCCAAAGAGGAACTCGAGCGGACCAACAAAATGCTCAAAGCCGAAATGGAAGACCTGGT
CAGCTCCAAGGATGACGTGGGCAAGAACGTCCATGAGCTGGAGAAGTCCAAGCGGGCCCTGGAGACCCAG
ATGGAGGAGATGAAGACGCAGCTGGAAGAGCTGGAGGACGAGCTGCAAGCCACGGAGGACGCCAAACTGC
GGCTGGAAGTCAACATGCAGGCGCTCAAGGGCCAGTTCGAAAGGGATCTCCAAGCCCGGGACGAGCAGAA
TGAGGAGAAGAGGAGGCAACTGCAGAGACAGCTTCACGAGTATGAGACGGAACTGGAAGACGAGCGAAAG
CAACGTGCCCTGGCAGCTGCAGCAAAGAAGAAGCTGGAAGGGGACCTGAAAGACCTGGAGCTTCAGGCCG
ACTCTGCCATCAAGGGGAGGGAGGAAGCCATCAAGCAGCTACGCAAACTGCAGGCTCAGATGAAGGACTT
TCAAAGAGAGCTGGAAGATGCCCGTGCCTCCAGAGATGAGATCTTTGCCACAGCCAAAGAGAATGAGAAG
AAAGCCAAGAGCTTGGAAGCAGACCTCATGCAGCTACAAGAGGACCTCGCCGCCGCTGAGAGGGCTCGCA

AACAAGCGGACCTCGAGAAGGAGGAACTGGCAGAGGAGCTGGCCAGTAGCCTGTCGGGAAGGAACGCACT
CCAGGACGAGAAGCGCCGCCTGGAGGCCCGGATCGCCCAGCTGGAGGAGGAGCTGGAGGAGGAGCAGGGC
AACATGGAGGCCATGAGCGACCGGGTCCGCAAAGCCACACAGCAGGCCGAGCAGCTCAGCAACGAGCTGG
CCACAGAGCGCAGCACGGCCCAGAAGAATGAGAGTGCCCGGCAGCAGCTCGAGCGGCAGAACAAGGAGCT
CCGGAGCAAGCTCCACGAGATGGAGGGGGCCGTCAAGTCCAAGTTCAAGTCCACCATCGCGGCGCTGGAG
GCCAAGATTGCACAGCTGGAGGAGCAGGTCGAGCAGGAGGCCAGAGAGAAACAGGCGGCCACCAAGTCGC
TGAAGCAGAAAGACAAGAAGCTGAAGGAAATCTTGCTGCAGGTGGAGGACGAGCGCAAGATGGCCGAGCA
GTACAAGGAGCAGGCAGAGAAAGGCAATGCCAGGGTCAAGCAGCTCAAGAGGCAGCTGGAGGAGGCAGAG
GAGGAGTCCCAGCGCATCAACGCCAACCGCAGGAAGCTGCAGCGGGAGCTGGATGAGGCCACGGAGAGCA
ACGAGGCCATGGGCCGCGAGGTGAACGCACTCAAGAGCAAGCTCAGGCGAGGAAACGAGACCTCTTTCGT
TCCTTCTAGAAGGTCTGGAGGACGTAGAGTTATTGAAAATGCAGATGGTTCTGAGGAGGAAACGGACACT
CGAGACGCAGACTTCAATGGAACCAAGGCCAGTGAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

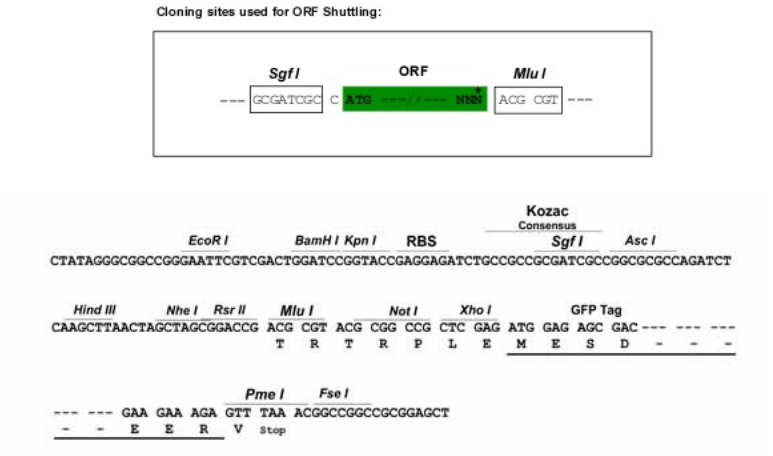
>RG221844 representing NM_002474
Red=Cloning site Green=Tags(s)

MAQKGQLSDDEKFLFVDKNFINSPVAQADWAAKRLVWVPSEKQGFEAASIKEEKGDEVVVELVENGKKVT
VGKDDIQKMNPPKFSKVEDMAELTCLNEASVLHNLRERYFSGLIYTYSGLFCVVVNPYKHLPIYSEKIVD
MYKGKKRHEMPPHIYAIADTAYRSMLQDREDQSILCTGESGAGKTENTKKVIQYLAVVASSHKGKKDTSI
TGELEKQLLQANPILEAFGNAKTVKNDNSSRFGKFIRINFDVTGYIVGANIETYLLEKSRAIRQARDERT
FHIFYYMIAGAKEKMRSDLLLEGFNNYTFLSNGFVPIPAAQDDEMFQETVEAMAIMGFSEEEQLSILKVV
SSVLQLGNIVFKKERNTDQASMPDNTAAQKVCHLMGINVTDFTRSILTPRIKVGRDVVQKAQTKEQADFA
VEALAKATYERLFRWILTRVNKALDKTHRQGASFLGILDIAGFEIFEVNSFEQLCINYTNEKLQQLFNHT
MFILEQEEYQREGIEWNFIDFGLDLQPCIELIERPNNPPGVLALLDEECWFPKATDKSFVEKLCTEQGSH
PKFQKPKQLKDKTEFSIIHYAGKVDYNASAWLTKNMDPLNDNVTSLLNASSDKFVADLWKDVDRIVGLDQ
MAKMTESSLPSASKTKKGMFRTVGQLYKEQLGKLMTTLRNTTPNFVRCIIPNHEKRSGKLDAFLVLEQLR
CNGVLEGIRICRQGFPNRIVFQEFRQRYEILAANAIPKGFMDGKQACILMIKALELDPNLYRIGQSKIFF
RTGVLAHLEEERDLKITDVIMAFQAMCRGYLARKAFAKRQQQLTAMKVIQRNCAAYLKLRNWQWWRLFTK
VKPLLQVTRQEEEMQAKEDELQKTKERQQKAENELKELEQKHSQLTEEKNLLQEQLQAETELYAEAEEMR
VRLAAKKQELEEILHEMEARLEEEEDRGQQLQAERKKMAQQMLDLEEQLEEEEAARQKLQLEKVTAEAKI
KKLEDEILVMDDQNNKLSKERKLLEERISDLTTNLAEEEEKAKNLTKLKNKHESMISELEVRLKKEEKSR
QELEKLKRKLEGDASDFHEQIADLQAQIAELKMQLAKKEEELQAALARLDDEIAQKNNALKKIRELEGHI
SDLQEDLDSERAARNKAEKQKRDLGEELEALKTELEDTLDSTATQQELRAKREQEVTVLKKALDEETRSH
EAQVQEMRQKHAQAVEELTEQLEQFKRAKANLDKNKQTLEKENADLAGELRVLGQAKQEVEHKKKKLEAQ
VQELQSKCSDGERARAELNDKVHKLQNEVESVTGMLNEAEGKAIKLAKDVASLSSQLQDTQELLQEETRQ
KLNVSTKLRQLEEERNSLQDQLDEEMEAKQNLERHISTLNIQLSDSKKKLQDFASTVEALEEGKKRFQKE
IENLTQQYEEKAAAYDKLEKTKNRLQQELDDLVVDLDNQRQLVSNLEKKQRKFDQLLAEEKNISSKYADE
RDRAEAEAREKETKALSLARALEEALEAKEELERTNKMLKAEMEDLVSSKDDVGKNVHELEKSKRALETQ
MEEMKTQLEELEDELQATEDAKLRLEVNMQALKGQFERDLQARDEQNEEKRRQLQRQLHEYETELEDERK
QRALAAAAKKKLEGDLKDLELQADSAIKGREEAIKQLRKLQAQMKDFQRELEDARASRDEIFATAKENEK
KAKSLEADLMQLQEDLAAAERARKQADLEKEELAEELASSLSGRNALQDEKRRLEARIAQLEEELEEEQG
NMEAMSDRVRKATQQAEQLSNELATERSTAQKNESARQQLERQNKELRSKLHEMEGAVKSKFKSTIAALE
AKIAQLEEQVEQEAREKQAATKSLKQKDKKLKEILLQVEDERKMAEQYKEQAEKGNARVKQLKRQLEEAE
EESQRINANRRKLQRELDEATESNEAMGREVNALKSKLRRGNETSFVPSRRSGGRRVIENADGSEEETDT
RDADFNGTKASE

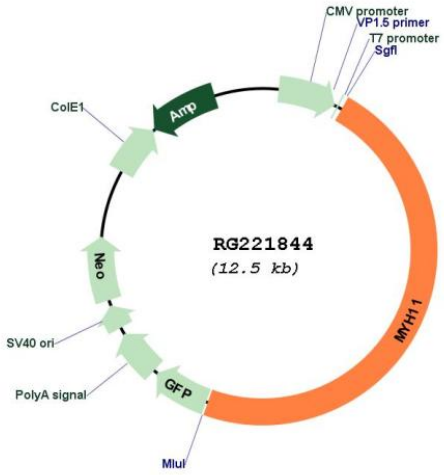
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_002474

ORF Size: 5916 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_002474.3
RefSeq Size:	6882 bp
RefSeq ORF:	5919 bp
Locus ID:	4629
UniProt ID:	P35749
Cytogenetics:	16p13.11
Domains:	IQ, myosin_head, Myosin_tail, M, Myosin_N
Protein Pathways:	Tight junction, Vascular smooth muscle contraction, Viral myocarditis
Gene Summary:	The protein encoded by this gene is a smooth muscle myosin belonging to the myosin heavy chain family. The gene product is a subunit of a hexameric protein that consists of two heavy chain subunits and two pairs of non-identical light chain subunits. It functions as a major contractile protein, converting chemical energy into mechanical energy through the hydrolysis of ATP. The gene encoding a human ortholog of rat NUDE1 is transcribed from the reverse strand of this gene, and its 3' end overlaps with that of the latter. The pericentric inversion of chromosome 16 [inv(16)(p13q22)] produces a chimeric transcript that encodes a protein consisting of the first 165 residues from the N terminus of core-binding factor beta in a fusion with the C-terminal portion of the smooth muscle myosin heavy chain. This chromosomal rearrangement is associated with acute myeloid leukemia of the M4Eo subtype. Alternative splicing generates isoforms that are differentially expressed, with ratios changing during muscle cell maturation. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008]