

Product datasheet for **MR219032**

Myo1g (NM_178440) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Myo1g (NM_178440) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Myo1g
Synonyms:	E430002D17Rik
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR219032 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCTTGCAGTGGGCAGGATGGAGGACGAAGAAGGCCCTGAGTATGGGAAACCAGACTTCGTGCTTTTGG
ATCAACTGACCATGGAGGACTTCATGGAGAACCAGAGCTCAGGTTTGAAGGGCCGTATCTATACCTA
CATTGGTGAGGTGCTCGTATCCGTGAACCCCTACCAGGAAGTCCATTGTATGGCCAGAGGCCATTGCC
AAGTACCAGGGCCGCGAGCTCTATGAGCGACCCTCATCTTTACGCCGTGCCAATGCTGCTTACAAGG
CAATGAAGCGCAGATCCAGGGACACCTGCATCGTCATCTCAGGGGAGAGTGGGCAGGGAAGACAGAAGC
CAGCAAGCACATCATGCAGTACATTGCTGCTGTACCAACCAAGCCAGAGGGCTGAGGTGGAGAGGGTG
AAGAATGTGCTCCTCAAGTCCACCTGCGTGTCTCGAAGCCTTTGGCAATGCCCGCACCAATCGCAACCACA
ACTCCAGCCGCTTTGGCAAGTACATGGACATCAACTTCGACTTCAAGGGGGATCCTGTTGGTGGACACAT
CCACAGCTACCTGCTGGAGAAGTCTAGGGTTCTCAAGCAACATGTAGGCGAGAGGAACTCCATGCCTTC
TACCAGTTGCTTCGAGGCAGTGAGGACCAAGAGCTGCAAGGACTGCATCTGGAAGAAATCCTGCTGTGT
ATAATTCACGCGTCAGGGAGCTGGGCTCAACATGGGTGTGCACAATGCCTTGGACAGTGATGAGAAGAG
CCACCAAGGAGTGATGGAGGCCATGAGGATCATCGGCTCAGTCTGACGAGGTGGAGTCCATCCATCCG
ATCCTTGCCGCATATTACACCTGGGAAACATCGAGTTTGTGGAGACAGAGGAAAATGGACCACAGAAAG
GAGGCCTGGAAGTGGCTGATGAGGCCCTGGTAGGATATGTGGCCAAGCTGACAGCCACTCCAGAGACCT
TGTTCTGCGAACCCTGCTGGCTCGAACAGTGGCTTCAGGAGGCCGAGAAGTCATTGAGAAGAGCCACACC
GTGGCTGAGGCCAGCTATGCCCGGGATGCCTGTGCAAAGGCGATGTACCAGCGACTGTTTGGTGGGTTG
TGAACAAGATCAATAGCATCATGGAACCCCGAAACCGAGACCCTCGGTGTGATGGCAAGGATACTGTCAT
TGGGGTCTGGACATTTACGGCTTTGAGGTGTTCCCTGTCAACAGCTTTGAGCAGTTCTGCATCAACTAC
TGCAATGAGAAGCTGCAGCAGCTCTTTATCCAGCTTATCCTGAAGCAAGAGCAGGAGGATGAGCGAG
AGGGCATCGCCTGGCAGACCATCGAGTACTTCAACAACGCTACCATTGTGGAACCTGTAGAGCAGCCCCG
CAGAGGCATCCTGGCTGTGTAGATGAAGCCTGCAGCAGGCAGGCCCATCACTGACCGAATCTTCTCTG



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CAGACCCTGGACACACACCACCGCCACCACCCACACTATTCCAGCCGCCAGCTTTGCCCTACGGACAAGA
 CCATGGAGTTTGGCCGAGACTTCCAGATCAAACACTATGCAGGCGATGTCACGTA CTGTGGAAGGCTT
 CATTGACAAGAAATAGAGACTCTCTTTCCAGGACTTCAAACGGCTGCTGTACAATAGTGTGGATCCCACC
 TTGCGAGCCATGTGGCCTGACGGGCAACAGGACATCACGGAAGTGACCAAGCGTCCCCTGACAGCCGGCA
 CACTCTTTAAGAAATCCATGGTTGCCCTGGTGGAAAAC TTGGCTTCCAAGGAACCCTTCTATGTCGGCTG
 CATCAAACCCAACGAAGACAAGGTGGCTGGGCGGCTCGATGAAGCCACTGTGTCACCAGGTGGAATAAC
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 TGCTCAGGTACAAGATGACCTGTGAGTACACGTGGCCCAACCACCTGCTGGGCTCTGACCGGGATGCGGT
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 TCCCCAAGGACGCTGGTCACTCTGGAGCAGAGCCGAGCTCGCCTGATTCCCATCATTGTGTTATTGCTGC
 AGAAGGCTTGGCGGGCACCCCTGGCTAGGTGGCACTGCCGGGACTAAGGGCCATCTACACCATCATGCG
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 CCCCCACTCTATGGCCGTGACCTTGTGTGGCCACACCTCCTGCTGTGCTGCAGCCCTTCCAGGACTT
 GCCGTGTTCTCTT CAGCAGGTGGCGGGCAGGCAGTTAGTGAAGAACATCCCTCCTT CAGACATGACCCA
 GATCAAGGCCAAGGTGGCTGCTATGGGGCCTTGAAGGATTGCGGCAGGACTGGGGTTGCCAGCGGGCC
 TGGGCCGAGACTACCTGCTCTGACACTGACAACCCACAGCTTCCATCTGTTTGTGAGCAACTAA
 AGGCACCTCGGGAGAAAGATGGCTTTGGCTCTGTGCTTTTCTCCAGCCATGTGCGCAAGGTGAATCGCTT
 CCGCAAGAGCCGGGACCGGGCCCTTCTGCTCACAGATCGGTATCTGTACAAGCTGGAGCCTGGACGACAG
 TACCGGTGATGCGGGCTGTGCCTCTGGAGCGGTGACAGGGCTGAGTGTGACCAGTGAAGAGATCAGC
 TGGTGGTGTACATGCCAAGGCTATGATGATCTTGTAGTGTGTACACCGTCCCAACCACCACTGGA
 CAATCGAATTGGGAGCTGGTGGCATGCTGGCTGCACACTGCCAGGGAGAGGGACGAACCTGAGGTC
 CGTGTCTGACTGCATCCACTGAGCCAGCGTGGTCCCAGCGCCTCATTCTGTGGAGCCAGGCCAG
 AGCAGCCTGAGCCAGATTTCAAAGCAGCCGTAGCACCTTTACCCTCCTCTGGCCAAGCCAC

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTAA

Protein Sequence:

>MR219032 protein sequence
 Red=Cloning site Green=Tags(s)

MLAVGRMEDEEGPEYGKPDFVLLDQLTMEDFMENLELRFKGRITYTYIGEVLVSNVPYQELPLYGPEAIA
 KYQGREL YERPPHLYAVANAAYKAMKRRSRDTCIVISGESGAGKTEASKHIMQYIAAVTNP SQRAEVERV
 KNVLLKSTCVLEAFGNARTNRNHSSRF GK YMDINFDKGD PVGGHIHSYLLEKSRVLKQHVGERNFHAF
 YQLLRGSEDQELQGLHLERNPAVYNFTRQGAGLNMGVHNLDSDEKSHQGVMEAMRIIGFSPDEVESIHR
 ILAAILHLGNIEFVETEENGPQKGGLEVADEALVGYVAKLTATPRDLVLRLLARTVASGGREVIEKSHT
 VAEASYARDACAKAMYQRLF EWV VNKINSIMEPRNRDPRCDGKDTVIGVLDIYGFVFPVNSFEQFCINY
 CNEKLQQLFIQLILKQEQEEYEREGIAWQTIEYFNNATIVELVEQPRRGILAVLDEACSTAGPITDRIFL
 QTL DTHRHHPHYSSRQLCPTDKTMEFGRDFQIKHYAGDVTYSVEGFIDKNRDSL FQDFKRLLYNSVDPT
 LRAMWPDGQDITEVTKRPLTAGTLFKNSMVALVENLASKEPFYVRCIKPNEDKVAGRLDEAHRHQVEY
 LGLLENVRVRAGFASRPYPFRLLRYKMTCEYTPNHLLGSDRDAVSALLEQHGLQGDVAFGHSKLFIR
 SPRTLVTLEQSRARLIP IIVLLLQKAWRGTLARWHCRRLRAIYTIMRWFRRHKVRAHLIELQRRFQAARQ
 PPLYGRDLVWPTPPAVLQPFQDTCRVLFSRWRARQLVKNIPPSDMTQIKAKVAAMGALQGLRQDWGCQRA
 WARDYLSSTDNPTASHLFAEQLKALREKDGFSVLFSSHVRKVNRFKSRDRALLLTD RYLKLEPGRQ
 YRVMRAVPLEAVTGLSVTSGRDQLVVLHAQGYDDL VVCLHRSQPPLDNRIGELVGMLAAHCQEGERTLEV
 RVSDCIPLSQRGARRLISVEPRPEQPEPDFQSSRSTFTLLWPSH

SGPTRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:


ACCN: NM_178440

ORF Size: 3075 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.

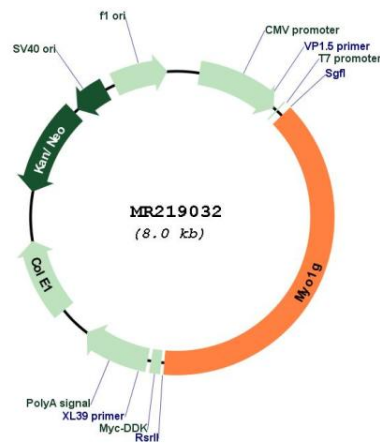
Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_178440.1](#), [NM_178440.2](#), [NM_178440.3](#), [NM_178440.4](#), [NP_848534.2](#)

RefSeq Size: 3307 bp
 RefSeq ORF: 3075 bp
 Locus ID: 246177
 UniProt ID: [Q5SUA5](#)
 Cytogenetics: 11 A1
 MW: 117.2 kDa

Gene Summary: Unconventional myosin required during immune response for detection of rare antigen-presenting cells by regulating T-cell migration (PubMed:25083865). Unconventional myosins are actin-based motor molecules with ATPase activity and serve in intracellular movements. Acts as a regulator of T-cell migration by generating membrane tension, enforcing cell-intrinsic meandering search, thereby enhancing detection of rare antigens during lymph-node surveillance, enabling pathogen eradication (PubMed:25083865). Also required in B-cells, where it regulates different membrane/cytoskeleton-dependent processes (PubMed:24310084). Involved in Fc-gamma receptor (Fc-gamma-R) phagocytosis (PubMed:23038771).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR219032