

## Product datasheet for **RC239559**

### **MIA3 (NM\_001300867) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MIA3 (NM_001300867) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MIA3
Synonyms:	ARNT; D320; TANGO; TANGO1; UNQ6077
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>RC239559 representing NM\_001300867  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGACTCAGTACCTGCCACTGTGCCTTCTATCGCCGCTACCCCGGGGACCCGGAATTGTGGGACCCCT  
 TGCTGTGCTCTACGCAGCCTTCATAGCCAAGCTGCTGGAGCTAGTTGCTACATTGCCTGATGATGTTC  
 GCCTGGCCTGATTTTTATGGACTGCCATGGAAACCTGTATTTACTACTGCCTTCTTGGGAATTGCTTCG  
 TTTGCCATTTTCTATGGAGAACTGTCTTGTGTGAAGGATAGAGTATATCAAGTCACGGAACAGCAAA  
 TTTCTGAGAAGTTGAAGACTATCATGAAAGAAAAACAGAACTTGTACAAAAATTGTCAAATATGAACA  
 GAAGATCAAGGAATCAAAGAAACATGTTCAAGAAACCAGGAAACAAAATATGATTCTCTCTGATGAAGCA  
 ATTAATATAAGGATAAAATCAAGACACTTGAAGAAAAATCAGGAAATTCTGGATGACACAGCTAAAAATC  
 TTCGTGTTATGCTAGAATCTGAGAGAGAACAGAATGTCAAGAATCAGGACTTGATATCAGAAAAACAAG  
 ATCTATAGAGAAGTTAAGGATGTTATTTCAATGAATGCCTCAGAATTTTCAGAGGTTTCAGATTGCACTT  
 AATGAAGCTAAGCTTAGTGAAGAGAAGGTGAAGTCTGAATGCCATCGGGTCAAGAAGAAAAATGCTAGGC  
 TTAAGAAGAAAAAGAGCAGTTGCAAGCAGGAAATCGAAGACTGGAGTAAATTACATGCTGAGCTCAGTGA  
 GCAAAATCAAATCATTTGAGAAGTCTCAGAAAGATTTGGAAGTAGCTCTTACTCACAAGGATGATAATATT  
 AATGCTTTGACTAACTGCATTACACAGTTGAATCTGTTAGAGTGTGAATCTGAATCTGAGGGTCAAAATA  
 AAGGTGGAATGATTAGATGAATTAGCAAATGGAGAAGTGGGAGGTGACCGGAATGAGAAGATGAAAA  
 TCAAATTAAGCAGATGATGGATGCTCTCGGACACAGACTGCAATATCGGTAGTTGAAGAGGATCTAAAG  
 CTTTTACAGCTTAAGCTAAGAGCCTCCGTGTCCACTAAATGTAACTGGAAGACCAGGTAAGAAATTTGG  
 AAGATGACCGCAACTCACTACAAGCTGCCAAAGCTGGACTGGAAGATGAATGCAAAACCTTGAGGCAGAA  
 AGTGGAGATTCTGAATGAGCTCTATCAGCAGAAGGAGATGGCTTTGCAAAAAGAACTGAGTCAAGAAGAG  
 TATGAACGGCAAGAAAGAGAGCACAGGCTGTGAGCTGCAGATGAAAAGGCAGTTTCGGCTGCAGAGGAAG  
 TAAAAACTTACAAGCGGAGAATTGAAGAAATGGAGGATGAATTACAGAAGACAGAGCGGTCAATTTAAAA  
 CCAGATCGCTACCCATGAGAAGAAAGCTCATGAAAAGCTGCAAGCTCGTGCTGCAGAAAAGAGCTATA  
 GCTGAAGAGAAAAGGGAAGCTGCCAATTTGAGACACAAATATTAGAATTAACACAAAAGATGGCAATGC  
 TGCAAGAAGAACCTGTGATTGTAACCAATGCCAGGAAAACCAATACACAAAACCTCCACGGAGAGG  
 TCCTCTGAGCCAGAAATGGCTCTTTGGCCATCCCCTGTGAGTGGTGGAGAATGCTCCCCTCCATTGACA  
 GTGGAGCCACCCGTGAGACCTCTCTGCTACTCTCAATCGAAGAGATATGCCTAGAAGTGAATTTGGAT  
 CAGTGGACGGCCCTACCTCATCTCGATGGTCAGCTGAGGCATCTGGGAAACCCTCTCCTTCTGATCC  
 AGGATCTGGTACAGCTACCATGATGAACAGCAGCTCAAGAGGCTCTTCCCCTACCAGGTAATCGATGAA  
 GGCAAGGTTAATATGGCTCCAAAAGGGCCCTCCTTTCCAGGAGTCCCTCTCATGAGCACCCCATGG  
 GAGGCCCTGTACCACCACCCATTGATATGGACCACCCTCAGCTCTGCGGACCTTTTGGGCCTCGGCC  
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 CCAGGAAGACGGGACCTGCCTCTCCACCCTCGGGGATTTTACCTGGACACGCACCATTTAGACCTTTAG  
 GTTCACTTGGCCCAAGAGAGTACTTTATTCCTGGTACCCGATTACCACCCCAACCCATGGTCCCCAGGA  
 ATACCCACCACCCTGCTGTAAGAGACTTACTGCCGTCAGGCTCTAGAGATGAGCCTCCACCTGCCTCT  
 CAGAGCACTAGCCAGGACTGTTACAGGCTTTAAAACAGAGCCCA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC239559 representing NM\_001300867  
 Red=Cloning site Green=Tags(s)

MDSVPATVPSIAATPGDPELVGPLSVLYAAFIKLELVATLPDDVQPGPDFYGLPWKPVFITAFGLIAS  
 FAIFLWRTVLVVKDRVYQVTEQQISEKLTIMKENTELVQKLSNYEQIKIKESKKHVQETRKQNMILSDEA  
 IKYKDKIKTLEKNQEILDDTAKNLRVMLESEREQNVKNQDLISENKKSEIEKLDVISMNAEFSEVQIAL  
 NEAKLSEKVKSECHRVQEENARLKKKKEQLQQEIEDWSKLHAELSEQIKSFEKSQKDLVALTHKDDNI  
 NALTNCITQLNLLECESESEGNKGGNDSDELANGEVGGDRNEKMNQIKQMMDVSRQTATISVVEEDLK  
 LLQLKLRASVSTKCNLEDQVKKLEDDRNSLQAAKAGLEDECKTLRQKVEILNELYQQKEMALQKKLSQEE  
 YERQEREHRLSAADEKAVSAAEEVKYKRRIEEMEDQLKTERSFKNQIATHEKKAHENWLKARAAERAI  
 AEEKREANLRHKLELQTKMAMLQEEPVIKMPGKPNQPPRRGPLSQNGSFGSPVSGGECSPPLT  
 VEPPVVRPLSATLNRDMPRSEFGSVDGPLPHRWSAEASGKPSDPSGTATMMNSSRGSSTRVLDE  
 GKVNMAPKGGPPFPGVPLMSTPMGGVPPPIRYGPPQLCGPFGRPLPPPFPGMRPPLGLREFAPGVP  
 PGRRLPLHPRGFLPHGAPFRPLGSLGPREFIPGTRLPPPTHGPPQYPPPPAVRDLLPSGSRDEPPPAS  
 QSTSQDCSQALKQSP

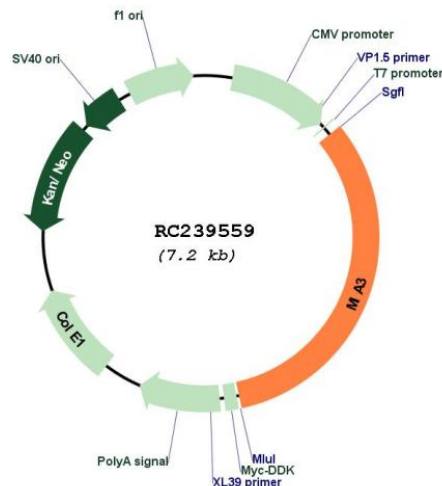
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfi-MluI

Cloning Scheme:



**Plasmid Map:**


**ACCN:** NM\_001300867

**ORF Size:** 2355 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\\_001300867.1](#), [NP\\_001287796.1](#)

**RefSeq Size:** 4924 bp

**RefSeq ORF:** 2358 bp

**Locus ID:** 375056

**UniProt ID:** [Q5JRA6](#)

**Cytogenetics:** 1q41

**MW:** 87.9 kDa

**Gene Summary:** Plays a role in the transport of cargos that are too large to fit into COPII-coated vesicles and require specific mechanisms to be incorporated into membrane-bound carriers and exported from the endoplasmic reticulum. This protein is required for collagen VII (COL7A1) secretion by loading COL7A1 into transport carriers. It may participate in cargo loading of COL7A1 at endoplasmic reticulum exit sites by binding to COPII coat subunits Sec23/24 and guiding SH3-bound COL7A1 into a growing carrier. Does not play a role in global protein secretion and is apparently specific to COL7A1 cargo loading. However, it may participate in secretion of other proteins in cells that do not secrete COL7A1. It is also specifically required for the secretion of lipoproteins by participating in their export from the endoplasmic reticulum (PubMed:27138255, PubMed:19269366). Required for correct assembly of COPII coat components at endoplasmic reticulum exit sites (ERES) and for the localization of SEC16A and membrane-bound ER-resident complexes consisting of MIA2 and PREB/SEC12 to ERES (PubMed:28442536).[UniProtKB/Swiss-Prot Function]