

## Product datasheet for **RC223637**

### Dynamin 2 (DNM2) (NM\_001005361) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Dynamin 2 (DNM2) (NM_001005361) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Dynamin 2
Synonyms:	CMT2M; CMTD11; CMTDIB; DI-CMTB; DYN2; DYNII; LCCS5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide  
Sequence:**

>RC223637 representing NM\_001005361  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGGCAACCGCGGGATGGAAGAGCTGATCCCGCTGGTCAACAACTGCAGGACGCCTTCAGCTCCATCG  
 GCCAGAGCTGCCACCTGGACCTGCCGAGATCGCTGTAGTGGGCGGCCAGAGCGCCGGCAAGAGCTCGGT  
 GCTGGAGAACTTCGTGGGCCGGGACTTCCTTCCCGCGGTTTACGGAATCGTCACCCGCGGCCTCTCATT  
 CTGCAGCTCATCTTCTCAAAAACAGAACATGCCGAGTTTTTGCAGTCAAGTCCAAAAAGTTTACAGACT  
 TTGATGAAGTCCGGCAGGAGATTGAAGCAGAGACCACAGGGTACGCGGGACCAACAAAGGCATCTCCCC  
 AGTGCCCATCAACCTTCGAGTCTACTCGCCACACGTGTTGAAGTACCCCTCATCGACTCCCGGGTATC  
 ACCAAGGTGCCTGTGGGCGACCAGCCTCCAGACATCGAGTACCAGATCAAGGACATGATCCTGCAGTTCA  
 TCAGCCGGGAGAGCAGCCTCATTCTGGCTGTACGCCCCCAACATGGACCTGGCCAACCTCCGACGCCCT  
 CAAGCTGGCCAAGGAAGTCGATCCCAAGGCCTACGGACCATCGGTGTCATCACCAAGCTTGACCTGATG  
 GACGAGGGCACCCAGCCAGGGACGTCTTGAGAAACAAGTTGCTCCCGTTGAGAAGAGGCTACATTTGGCG  
 TGGTGAACCCGAGCCAGAAGGATATTGAGGGCAAGAAGGACATCCGTGCAGCACTGGCAGCTGAGAGGAA  
 GTTCTTCTCTCCACCCGGCCTACCGGCACATGGCCGACCGCATGGGCACGCCACATCTGCAGAAGACG  
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 AGCCCTGCTGCAGATGGTCCAGCAGTTTGGGGTGGATTTGAGAAGAGGATCGAGGGCTCAGGAGATCAG  
 GTGGACACTCTGGAGCTCTCCGGGGCGCCGAATCAATCGCATCTTCCACGAGCGGTTCCCATTTGAGC  
 TGGTGAAGATGGAGTTTGACGAGAAGGACTTACGACGGGAGATCAGCTATGCCATTAAGAACATCCATGG  
 AGTCAGGACGGGGCTCTTCAACCCCGACATGGCCTTTGAAGCCATTGTGAAAAAACAGATTGTAATACTC  
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 AGAAGCTCAGTTCTACCCCGGTTGCGAGAGGAGACAGAGCGAATCGTCACCACTTACATCCGGGAACG  
 GGAGGGGAGAACGAAGGACCAGATTCTTCTGCTGATCGACATTGAGCAGTCTACATCAACACGAACCAT  
 GAGGACTTCATCGGGTTTGCCAATGCCAGCAGAGGAGCAGCAGCTGAACAAGAAGAGAGCCATCCCCA  
 ATCAGGGGAGATCCTGGTATCCGACGGGCTGGCTGACCATCAACAACATCAGCCTGATGAAAGGCGG  
 CTCCAAGGAGTACTGGTTTGTGCTGACTCCGAGTCACTGTCTGTTACAAGGATGAGGAGGAGAAAGAG  
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 ACGTCTTCGCCATCTTCAACACGGAGCAGAGAAACGTCTACAAGGACCTGCGGCAGATCGAGCTGGCCTG  
 TGACTCCAGGAAGAGCTGGACAGCTGGAAGGCCTCGTTCTCCGAGCTGGCGTCTACCCCGAGAAGGAC  
 CAGGCAGAAAACGAGGATGGGGCCAGGAGAACACCTTCTCCATGGACCCCAACTGGAGCGGCAGGTGG  
 AGACCATTCGCAACCTGGTGGACTCATACGTGGCCATCATCAACAAGTCCATCCGCGACCTCATGCCAAA  
 GACCATCATGCACCTCATGATCAACAATACGAAGGCCTTCATCCACCACGAGCTGCTGGCCTACCTATAC  
 TCCTCGGCAGACCAGAGCAGCCTCATGGAGGAGTCGGTGACCAAGGACAGCCAGCCAGCCAGCAGATGCTG  
 GCATGTACCATGCCCTCAAGGAGGCGCTCAACATCATCGGTGACATCAGCACCAGCACTGTGTCCACGCC  
 GTACCCCGCCTGTGATGACACCTGGCTCCAGAGCGCCAGCCACAGCCCACTCCACAGCGCCGA  
 CCGGTGTCCAGCATACACCCCTGGCCGGCCCGCAGCAGTGGGGGCCCACTCCAGGGCCCCCTGA  
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 CGTGTGTTGCCAACAGTGACCTCTTCCAGCCCCGCTCAGATCCCATCTCGGCCAGTTCCGGATCCCCCA  
 GGGATTCCCCAGGAGTGCCAGCAGAAGACCCCTGCTGCGCCAGCCGGCCACCATTATCCGCCAG  
 CCGAGCCATCCCTGCTCGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC223637 representing NM\_001005361  
 Red=Cloning site Green=Tags(s)

MGNRGMEELIPLVNLQDAFSSIGQSCHLDLPQIAVVGGSAGKSSVLENFVGRDFLPRGSGIVTRRPLI  
 LQLIFSKTEHAFLHCKSKKFTDFDEVQRQIEAETDRVTGTNKGISPVINLRVYSPHVLNLTIDLPGI  
 TKVPVGDQPPDIEYQIKDMILQFISRESSLILAVTPANMDLANSALKLAKEVDPQGLRTIGVITKLDLM  
 DEGTDARDVLENKLLPLRRGYIGVVNRSQKDIEGKKDIRAALAAERKFFLSHPAYRHMAADRMTGPHLQKT  
 LNQQLTNHIRESLALRSKLSQQLLSLEKEVEEYKNFRPDDPTRKTKALLQMVQQFVDFEKRIEGSGDQ  
 VDTLELSGGARINRIFHERFPFELVKMEFDEKDLRREISYAIKNIHGVRTGLFTPDMAFEAIVKKQIVKL  
 KEPSLKCVDLVVELATVIKKCAEKLSSYPRLREETERIVTTYIREREGRTKDQILLIDIEQSYINTNH  
 EDFIGFANAQRSTQLNKKRAIPNQGEILVIRRGWLTINNI SLMKGSKEYWVFLTAESLSWKDEEEKE  
 KKYMLPLDNLKIRDVEKGFMSNKHVFAIFNTEQRNVYKDLRQIELACDSQEDVDSWKASFLRAGVYPEKD  
 QAENEDGAQENTFSMDPQLERQVETIRNLVDSYVAIINKSIRDLMPKTIMHLMINNTKAFIHELLAYLY  
 SSADQSSLMEESADQAQRDDMLRMYHALKEALNIIGDISTSTVSTVPPPPVDDTLWQSASSHSPTPQR  
 PVSSIHPGRPPAVRGPTPGPPLIPVPVAAAASFAPPISRPGPQSVFANSDFPAPPQIPSRPVRIPP  
 GIPPGVPSRRPPAAPSRTIIRPAEPSLLD

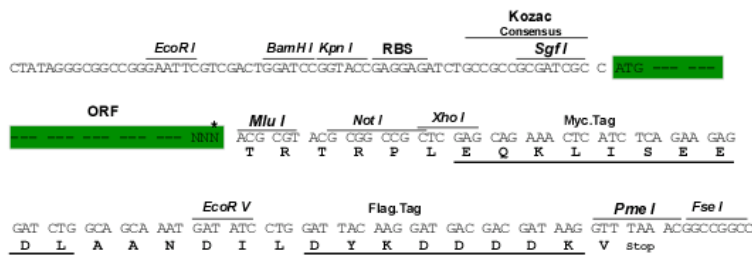
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6454\\_h07.zip](https://cdn.origene.com/chromatograms/mk6454_h07.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:

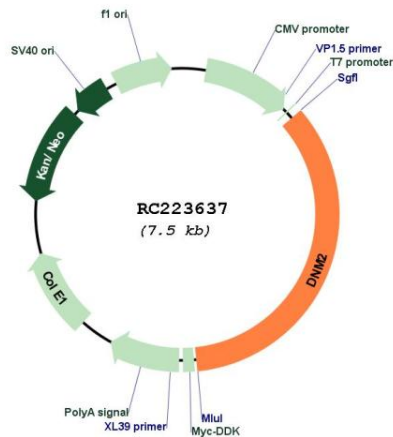


\* The last codon before the Stop codon of the ORF

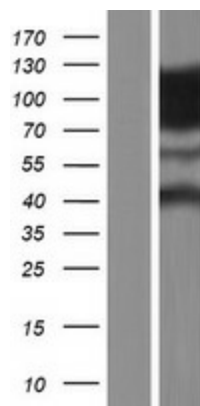
<b>ACCN:</b>	NM_001005361
<b>ORF Size:</b>	2610 bp
<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability 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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_001005361.3</a>
<b>RefSeq Size:</b>	3633 bp
<b>RefSeq ORF:</b>	2613 bp
<b>Locus ID:</b>	1785
<b>UniProt ID:</b>	<a href="#">P50570</a>
<b>Cytogenetics:</b>	19p13.2
<b>Protein Families:</b>	Transcription Factors
<b>Protein Pathways:</b>	Endocytosis, Fc gamma R-mediated phagocytosis
<b>MW:</b>	97.8 kDa

**Gene Summary:**

Dynammins represent one of the subfamilies of GTP-binding proteins. These proteins share considerable sequence similarity over the N-terminal portion of the molecule, which contains the GTPase domain. Dynammins are associated with microtubules. They have been implicated in cell processes such as endocytosis and cell motility, and in alterations of the membrane that accompany certain activities such as bone resorption by osteoclasts. Dynammins bind many proteins that bind actin and other cytoskeletal proteins. Dynammins can also self-assemble, a process that stimulates GTPase activity. Five alternatively spliced transcripts encoding different proteins have been described. Additional alternatively spliced transcripts may exist, but their full-length nature has not been determined. [provided by RefSeq, Jun 2010]

**Product images:**


Circular map for RC223637



Western blot validation of overexpression lysate (Cat# [LY423698]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223637 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).