

## Product datasheet for **RC208525**

### **Dynamin 2 (DNM2) (NM\_004945) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Dynamin 2 (DNM2) (NM_004945) 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:**

>RC208525 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGGCAACCGGGGATGGAAGAGCTGATCCCGCTGGTCAACAACTGCAGGACGCCTTCAGCTCCATCG  
 GCCAGAGCTGCCACCTGGACCTGCCGAGATCGCTGTAGTGGGCGGCCAGAGCGCCGGCAAGAGCTCGGT  
 GCTGGAGAATTCTGGGGCCGGACTTCCTTCCCGCGGTTTACGGAATCGTCACCCGCGGCCTCTCATT  
 CTGCAGCTCATCTTCTCAAAAACAGAACATGCCGAGTTTTTGCAGTCAAGTCCAAAAAGTTTACAGACT  
 TTGATGAAGTCCGGCAGGAGATTGAAGCAGAGACCACAGGGTACGCGGGACCAACAAAGGCATCTCCCC  
 AGTGCCCATCAACCTTCGAGTCTACTCGCCACACGTGTTGAAGTACCCCTCATCGACTCCCGGGTATC  
 ACCAAGGTGCCTGTGGGCGACCAGCCTCCAGACATCGAGTACCAGATCAAGGACATGATCCTGCAGTTCA  
 TCAGCCGGGAGAGCAGCCTCATTCTGGCTGTACGCCCCCAACATGGACCTGGCCAACCTCCGACGCCCT  
 CAAGCTGGCCAAGGAAGTCGATCCCAAGGCCTACGGACCATCGGTGTCATCACCAAGCTTGACCTGATG  
 GACGAGGGCACCCAGCCAGGGAGCTTGGAGAACAAGTTGCTCCCGTTGAGAAGAGGCTACATTTGGCG  
 TGGTGAACCCGAGCCAGAAGGATATTGAGGGCAAGAAGGACATCCGTGCAGCACTGGCAGCTGAGAGGAA  
 GTTCTTCTCTCCACCCGGCCTACCGGCACATGGCCGACCGCATGGGCACGCCACATCTGCAGAAGACG  
 CTGAATCAGCAACTGACCAACCACATCCGGGAGTCGCTGCCGGCCCTACGTAGCAAACTACAGAGCCAGC  
 TGCTGTCCCTGGAGAAGGAGGTGGAGGAGTACAAGAACTTTGGCCCGACGACCCACCCGCAAAACCAA  
 AGCCCTGCTGCAGATGGTCCAGCAGTTTGGGGTGGATTTGAGAAGAGGATCGAGGGTCCAGGAGATCAG  
 TGGGACACTCTGGAGCTCTCCGGGGCGCCGAATCAATCGCATCTTCCACGAGCGGTTCCCATTTGAGC  
 TGGTGAAGATGGAGTTTGACGAGAAGGACTTACGACGGGAGATCAGCTATGCCATTAAGAACATCCATGG  
 AGTCAGGACCGGGCTTTTACCCCGGACTTGGCATTTCGAGGCCATTGTGAAAAAGCAGGTGTCGAACTG  
 AAAGAGCCCTGTCTGAAATGTGTCGACCTGTTATCCAGGAGCTAATCAATACAGTTAGGCAAGTGTACCA  
 GTAAGCTCAGTTCCTACCCCGGTTGCGAGAGGAGACAGAGCGAATCGTCACCACTTACATCCGGGAACG  
 GGAGGGGAGAACGAAGGACCAGATTCTTCTGCTGATCGACATTGAGCAGTCTACATCAACACGAACCAT  
 GAGGACTTCATCGGGTTTGCCAATGCCAGCAGAGGAGCAGCAGCTGAACAAGAAGAGAGCCATCCCCA  
 ATCAGGTGATCCGCAGGGGCTGGCTGACCATCAACAACATCAGCCTGATGAAAGGCGGCTCAAGGAGTA  
 CTGGTTTGTGCTGACTGCCGAGTCACTGTCTGGTACAAGGATGAGGAGGAGAAAGAGAAGAAGTACATG  
 CTGCCTCTGGACAACCTCAAGATCCGTGATGTGGAGAAGGGCTTCATGTCCAACAAGCACGTCTTCGCCA  
 TCTTCAACACGGAGCAGAGAAACGTCTACAAGGACCTGCCGCAGATCGAGCTGGCCTGTGACTCCCAGGA  
 AGACGTGGACAGCTGGAAGGCCTCGTTCCTCCGAGCTGGCGTCTACCCCGAGAAGGACCAGGCAGAAAAC  
 GAGGATGGGGCCAGGAGAACACCTTCTCCATGGACCCCAACTGGAGCGGCAGGTGGAGACCATTTCGCA  
 ACCTGGTGGACTCATACGTGGCCATCATCAACAAGTCCATCCCGGACCTCATGCCAAAGACCATCATGCA  
 CCTCATGATCAACAATACGAAGGCCTTCATCCACCACGAGCTGTGGCCTACCTATACTCCTCGGCAGAC  
 CAGAGCAGCCTCATGGAGGAGTCGGCTGACCAGGCACAGCGGGGACGACATGCTGCGCATGTACCATG  
 CCCTCAAGGAGGGCTCAACATCATCGGTGACATCAGCACCAGCACTGTGTCCACGCCTGTACCCCGGC  
 TGTCGATGACACCTGGCTCCAGAGCGCCAGCAGCCACAGCCCCACTCCACAGCGCGGAGGTTCCAGC  
 ATACACCCCTGGCCGGCCCCAGCAGTGAAGGGCCCCACTCCAGGGCCCCCTGATTCTGTTCCTCG  
 TGGGGGACGAGCCTCCTTCTCGCGCCCCAATCCCATCCCGGCTGGACCCAGAGCGTGTTCGCCAA  
 CAGTGACCTTCCAGCCCCGCTCAGATCCCATCTCGGCCAGTTTCGGATCCCCCAGGGATTCCCCCA  
 GGAGTGCCAGCAGAAGACCCCTGCTGCGCCAGCCGGCCACCATTATCCGCCAGCCGAGCCATCCC  
 TGCTCGAC

**ACGGT**ACGCGGCGGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC208525 protein sequence  
 Red=Cloning site Green=Tags(s)

MGNRGMEELIPLVNLQDAFSSIGQSCHLDLPQIAVVGGSAGKSSVLENFVGRDFLPRGSGIVTRRPLI  
 LQLIFSKTEHAFLHCKSKKFTDFDEVQRQEIEAETDRVTGTNKGISPVINL RVYSPHVLNLTIDLPGI  
 TKVPVGDQPPDIEYQIKDMILQFISRESSLILAVTPANMDLANSALKLAKEVDPQGLRTIGVITKLDLM  
 DEGTDARDVLENKLLPLRRGYIGVVNRSQKDIEGKKDIRAALAAERKFFLSHPAYRHMA DRMGTPHLQKT  
 LNQQLTNHIRESLPALRSKLQSLLSLEKEVEEYKNFRPDDPTRKTKALLQMVQQFVDFEKRIE GSGDQ  
 VDTLELSGGARINRIFHERFPFELVKMEFDEKDLRREISYAIKNIHGVRTGLFTPDLAFAEIVKKQVVKL  
 KEPCLKCVDLVIQELINTV RQCTSKLSSYPRLREETERIVTTYIREREGRTKDQILLIDIEQSYINTNH  
 EDFIGFANAQQRSTQLNKKRAIPNQVIRRGWLTINNISLMKGSKEYWFLTAESLSWKDEEEKEKYM  
 LPLDNLKIRDVEKGFMSNKHVFAIFNTEQRNVYKDLRQIELACDSQEDVDSWKASFLRAGVYPEKDQ AEN  
 EDGAQENTFSMDPQLERQVETIRNLVDSYVAIINKSIRDLM PKTIMHLMINNTKAFIHHELLAYLYSSAD  
 QSSLMEESADQAQRDDMLRMYHALKEALNIIGDISTSTVSTPVP PPVDDTWLQSASSHSPTPQRRPVSS  
 IHPPGRPPAVRGPTPGPPLIPVPVGA AASF SAPPISRP GPQSVFANSDFPAPPQIPSRPVRIPP GIPP  
 GVPSRRPPAAPSRPTIIRPAE PSLLD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mk6834\\_a10.zip](https://cdn.origene.com/chromatograms/mk6834_a10.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:

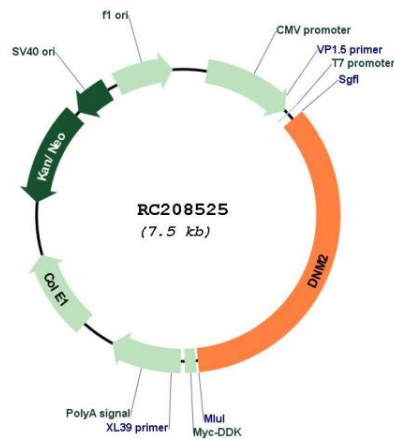


\* The last codon before the Stop codon of the ORF

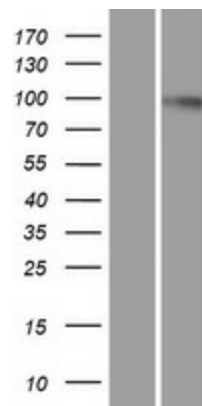
<b>ACCN:</b>	NM_004945
<b>ORF Size:</b>	2598 bp
<b>OTI Disclaimer:</b>	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), 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>
<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>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_004945.3</a>
<b>RefSeq Size:</b>	3672 bp
<b>RefSeq ORF:</b>	2601 bp
<b>Locus ID:</b>	1785
<b>UniProt ID:</b>	<a href="#">P50570</a>
<b>Cytogenetics:</b>	19p13.2
<b>Domains:</b>	dynamamin_2, dynamamin, PH, GED
<b>Protein Families:</b>	Transcription Factors
<b>Protein Pathways:</b>	Endocytosis, Fc gamma R-mediated phagocytosis
<b>MW:</b>	97.7 kDa

**Gene Summary:**

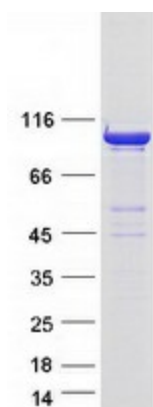
Dynammins represent one of the subfamilies of GTP-binding proteins. These proteins share considerable sequence similarity over the N-terminal portion of the molecule, which contains the GTPase domain. Dynammins are associated with microtubules. They have been implicated in cell processes such as endocytosis 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 RC208525



Western blot validation of overexpression lysate (Cat# [LY417632]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208525 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified DNM2 protein (Cat# [TP308525]). The protein was produced from HEK293T cells transfected with DNM2 cDNA clone (Cat# RC208525) using MegaTran 2.0 (Cat# [TT210002]).