

## Product datasheet for **RC229163**

### CCDC109B (MCUB) (NM\_017918) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CCDC109B (MCUB) (NM_017918) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CCDC109B
Synonyms:	CCDC109B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC229163 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTTGTCAACAGTTGGTTCATTCCCTTCAGGACCTACAAAATGAAGATAAGGGTATCAAACCTGCAGCCA  
TCTTCACAGCAGATGGCAACATGATTTTCAGCTTCTACCTTGATGGATATTTTGCTAATGAATGATTTTAA  
ACTTGTCATTAATAAAATAGCATATGATGTGCAGTGTCCAAGAGAGAAAAACCAAGTAATGAGCACACT  
GCTGAGATGGAACACATGAAATCCTTGGTTCACAGACTATTTACAATCTTGCATTTAGAAGAGTCTCAGA  
AAAAGAGAGAGCACCATTTACTGGAGAAAATTGACCACCTGAAGGAACAGCTGCAGCCCCCTGAACAGGT  
GAAAGCTGGAATAGAAGCTCATTTCGGAAGCCAAAACAGTGGACTCCTGTGGGCTGGATTGGCACTGCTG  
TCCATTACAGGTGGGGCACTGGCCTGGCTCACGTGGTGGGTGACTCCTGGGATATCATGGAGCCAGTTA  
CATACTTCATCACATTTGCAAATTCATGGTCTTTTTGCATACTTTATAGTCACTCGACAGGATTATAC  
TTACTCAGCTGTTAAGAGTAGGCAATTTCTTCAGTTCTCCACAAGAAATCAAAGCAACAGCACTTTGAT  
GTGCAGCAATACAACAAGTTAAAAGAAGACCTTGCTAAGGCTAAAGAATCCCTGAAACAGGCGGTCATT  
CTCTCTGTTTGCAAATGCAAGTAGAAGAACTCAATGAAAAGAAT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC229163 protein sequence  
Red=Cloning site Green=Tags(s)

MLSTVGSFLQDLQNEKGIKTAIFTADGNMISASTLMDILLMNDFKLVINKIAYDVQCPKREKPSNEHT  
 AEMEHMKS LVHRLFTILHLEESQKKREHLLLEKIDHLKEQLQPLEQVKAGIEAHSEAKTSGLLWAGLALL  
 SIQGGALAWLTWWVYSDIMEPVTYFITFANSMVFFAYFIVTRQDYTYSAVKSRQFLQFFHKSKQQHFD  
 VQYQYNKLEKDLAKAKESLQARHSLCLQMVEELNEKN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6722\\_a10.zip](https://cdn.origene.com/chromatograms/mk6722_a10.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



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

**ACCN:** NM\_017918

**ORF Size:** 744 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\\_017918.3](#), [NP\\_060388.1](#)

**RefSeq Size:** 1298 bp

**RefSeq ORF:** 1011 bp

**Locus ID:** 55013

**UniProt ID:** [Q9NWR8](#)

**Cytogenetics:** 4q25

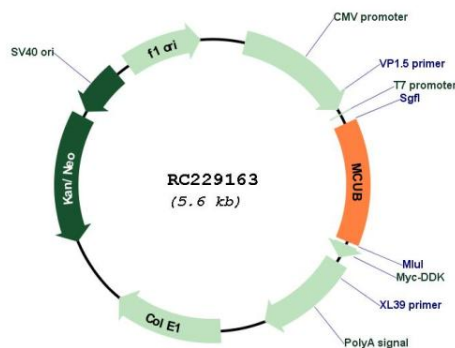
**Domains:** DUF607

**Protein Families:** Transmembrane

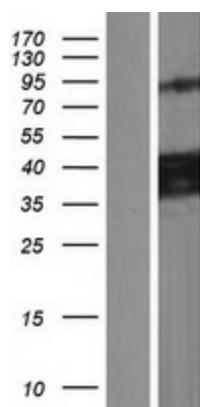
**MW:** 28.8 kDa

**Gene Summary:** Negatively regulates the activity of MCU, the mitochondrial inner membrane calcium uniporter, and thereby modulates calcium uptake into the mitochondrion. Does not form functional calcium channels by itself. Mitochondrial calcium homeostasis plays key roles in cellular physiology and regulates cell bioenergetics, cytoplasmic calcium signals and activation of cell death pathways.[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for RC229163



Western blot validation of overexpression lysate (Cat# [LY432187]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC229163 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).