

## Product datasheet for **SC114478**

### CHCHD2 (NM\_016139) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CHCHD2 (NM_016139) Human Untagged Clone
Tag:	Tag Free
Symbol:	CHCHD2
Synonyms:	C7orf17; MIX17B; MNRR1; NS2TP; PARK22
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC114478 sequence for NM_016139 edited (data generated by NextGen Sequencing)

```
ATGCCCGGTGGAAGCCGAAGCCGCACCTCCCGCATGGCCCTCCGGCCAGCCGGGCCCT  
CAGATGAGAGCTGCACCCAGGCCAGCACCAAGTCGCTCAGCCACCAGCAGCGGCACCCCA  
TCTGCAGTTGGCTCTTCTGCTGCTGCGCCCGGCAGCCAGGTCTGATGGCCAGATGGCA  
ACCACTGCAGCTGGCGTGGCTGTGGGCTCTGCTGTGGGGCACACATTGGGTACGCCATT  
ACTGGGGGCTTCAGTGGAGGAAGTAATGCTGAGCCTGCGAGGCCTGACATCACTTACCAG  
GAGCCTCAGGGAACCCAGCCAGCACAGCAGCAGCAGCCTTGCCTCTATGAGATCAAACAG  
TTTCTGGAGTGTGCCAGAACCAGGGTGACATCAAGCTCTGTGAGGGTTTCAATGAGGTG  
CTGAAACAGTGCCGACTTGCAAACGGATTGGCCTAA
```

Clone variation with respect to NM\_016139.2



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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_016139 unedited  
 TGTAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGCTTCGGTGGTTGTCCC  
 ACGTCCGGAGGCCTAGCCGTCGCTTACCTAGGATGCCGCGTGAAGCCGAAGCCGCACCT  
 CCCGCATGGCCCCCTCCGGCCAGCCGGGCCCTCAGATGAGAGCTGCACCCAGGCCAGCAC  
 CAGTCGCTCAGCCACCAGCAGCGGCACCCCATCTGCAGTTGGCTCTTCTGCTGTGCGC  
 CCCGGCAGCCAGGTCTGATGGCCAGATGGCAACCACTGCAGCTGGCGTGGCTGTGGGCT  
 CTGCTGTGGGGCACACATTGGGTCACGCCATTACTGGGGCTTCAGTGGAGGAAGTAATG  
 CTGAGCCTGCGAGGCCTGACATCACTTACCAGGAGCCTCAGGGAACCCAGCCAGCACAGC  
 AGCAGCAGCCTTGCCTCTATGAGATCAAACAGTTTCTGGAGTGTGCCAGAACCCAGGGTG  
 ACATCAAGCTCTGTGAGGGTTTCAATGAGGTGCTGAAACAGTGCCGACTTGCAAACGGAT  
 TGGCCTAATGAAGAAGTTCAACCTGGAGAGATGGAAAATCAGCTCTATAACTAAGTTAA  
 TTTAGTATAAAAAATAGAATTGATAGTGAGGGTATAAAGTGAACCATCAGTTAAACCTCT  
 CCTGTCATTCTGGCTTCCTTTGCTCAGAATTGAAATGGAAGTGGGGGTGCCNACTC  
 TGTANAATCTGGGACTGGGCANATGGTTGTGTGGCCTCCNAACTAGCTGGTATGGTAT  
 GATTNTATNCTTTTGGGAGTTAAATAGAATAAGTCATTNTCTTNCAGGTATGGGNTTA  
 AAAAAAAAAAAAAAAGTCTGACTCTAGATTGCGGCCGCGGTATAGCTGTTTCTGAACAG  
 ATCCCGGGTGGGATC

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_016139 unedited  
 GGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTAAACCATACCTTGAAGAAAAT  
 GACTTTATTCTAATTAACACAAAGAATAAAATCATAACATAACAGCTAGTTTAAAGGAG  
 GCCACACAAAACATTTGCCAGTCCAGATTCTACAGAGTAGGGACACCCCACTTCCATT  
 TCAATTCTGAAGCAAGGAAGCCAGGAATGACAGGAGAGGTTTAACTGATGTTACTCTTT  
 ATACCCTCACTATCAATTCTATTTTTATACTAAATTAAGTTATGAGAGCTGATTTT  
 CCATCTCTCCAGTTGAACCTTCTCATTAGGCCAATCCGTTTGCAAGTCGGCACTGTTTC  
 AGCACCTCATTGAAACCCTCACAGAGCTTGATGTACCCTGGTCTGGGCACACTCCAGA  
 AACTGTTTGATCTCATAGAGGCAAGGCTGCTGCTGCTGTGCTGGCTGGGTTCCCTGAGGC  
 TCCTGGTAAGTGATGTCAGGCCTCGCAGGCTCAGCATTACTTCTCCACTGAAGCCCCCA  
 GTAATGGCGTGACCCAATGTGTGCCCCACAGCAGAGCCCACAGCCACGCCAGCTGCAGTG  
 GTTGCCATCTGGGCCATCAGACCTGGCTGCCGGGGCAGCAGCAGAAGAGCCAAGTCA  
 GATGGGGGTGCCGCTGCTGGTGGCTGANGGACTGGTGTGCTGGCTGGGTGCAGCTCTCATC  
 TGAGGGGCCNNGCTGCCGNAGGGGCATGCNNGAGGTGCGGCTTCGGCTCCCGCGGCATC  
 CTAGTAAGCGACGGCTAGGCCTCCGGACGTGGGACACCCACCGAAGCCTCGTGCCGATTC  
 CGGGCGCCCTATATGAGTCGTATACAAATTCTGAGGGTCACTAACGAGCTTGCTATATAG  
 ACCTCCACGTACAGCCTACCGCATNGCGTAACGGGCCGGGTATTACAACCTTTGGAAGGC  
 CGCTGATTGGGGCAAAAACCTCCTGGAGN

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_016139

**Insert Size:**

840 bp

**OTI Disclaimer:** 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 [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

**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\\_016139.2](#), [NP\\_057223.1](#)

**RefSeq Size:** 831 bp

**RefSeq ORF:** 456 bp

**Locus ID:** 51142

**UniProt ID:** [Q9Y6H1](#)

**Cytogenetics:** 7p11.2

**Domains:** DUF657

**Gene Summary:**

The protein encoded by this gene belongs to a class of eukaryotic CX(9)C proteins characterized by four cysteine residues spaced ten amino acids apart from one another. These residues form disulfide linkages that define a CHCH fold. In response to stress, the protein translocates from the mitochondrial intermembrane space to the nucleus where it binds to a highly conserved 13 nucleotide oxygen responsive element in the promoter of cytochrome oxidase 4I2, a subunit of the terminal enzyme of the electron transport chain. In concert with recombination signal sequence-binding protein J, binding of this protein activates the oxygen responsive element at four percent oxygen. In addition, it has been shown that this protein is a negative regulator of mitochondria-mediated apoptosis. In response to apoptotic stimuli, mitochondrial levels of this protein decrease, allowing BCL2-associated X protein to oligomerize and activate the caspase cascade. Pseudogenes of this gene are found on multiple chromosomes. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Feb 2016]

Transcript Variant: This variant (2) uses an alternate splice site in the 3' coding region, which results in a frameshift compared to variant 1. It encodes isoform 2, which has a shorter and distinct C-terminus compared to isoform 1.