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# Product datasheet for MC221199

## Ythdc1 (NM_177680) Mouse Untagged Clone

### Product data:

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| **Product Type:** | Expression Plasmids |
| **Product Name:** | Ythdc1 (NM_177680) Mouse Untagged Clone |
| **Tag:** | Tag Free |
| **Symbol:** | Ythdc1 |
| **Synonyms:** | A730098D12Rik; C80342; mKIAA1966 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**Fully Sequenced ORF:**

>MC221199 representing NM_177680
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGGCCGACAGCCGGGAGGAGAAAGATGGGGAACTTAATGTTTTGGATGATATTTTGACTGAAGTAC
CAGAACAGGATGATGAATTGTATAATCCAGAGAGTGAACAAGATAAAAATGAGAAAAAAGGATCAAAAAG
AAAAAGTGAGAGAATGGAGTCTACTGACACCAAGCGACAAAAACCTTCCATCCATTCAAGACAATTGATT
TCTAAGCCACTAAGCTCATCTGTAAGCAATAATAAAAGAATAGTTAGTACAAAAGGAAAGTCGGTTACAG
AATATAAAAATGAGGAATATCAAAGATCTGAAAGGAACAAGCGTCTAGATGCTGATCGAAAAATTCGTCT
GTCAAGCAGTTCCTCTAGAGAACCTTACAAGAGTCAACCAGAAAAAACTTGTCTACGGAAAAGGGATTCT
GAAAGAAGGGCCAAGTCTCCTACACCAGATGGTTCTGAGAGAATTGGGCTTGAAGTTGATAGACGTGCAA
GCAGATCCAGCCAGTCTTCAAAGGAAGAGGTGAACTCTGAAGACTATGGCTCTGACCACGAGACAGGAAG
CAGTGGTTCTTCTGAACAGGGCAACAACACTGAGAATGAGGAGGAAGGAGGGGAGGAAGATGTAGAGGAA
GATGAAGAGGTAGATGAAGATGCAGAAGATGATGAGGAAGTGGATGAAGATGCAGAGGAGGAGGAGGAAG
AGGATGAAGAGGAAGAAGAGGATGAGGACGAGGATGAAGAGGAAGAAGAAATATGAACAGGATGAGAGAGA
TCAGAAGGAAGAAGGGAATGATTATGACACCCGAAGTGAGGCCAGTGATTCTGGTTCCGAGTCTGTTTCC
TTCACAGATGGATCTGTCAGATCTGGGTCAGGAACAGATGGATCAGATGAGAAAAAGAAGGAAAGGAAGA
GAGCTCGAGGCATATCACCCATTGTCTTTGATAGAAGTGGCAGTTCTGCATCAGAGTCATATGCAGGTTC
AGAAAAGAAGCATGAGAAATTATCATCTTCCGTTCGTGCTGTCCGAAAAGATCAAACCAGTAAACTCAAA
TATGTCCTTCAGGATGCAAGATTTTTCCTCATAAAGAGTAATAACCATGAGAATGTGTCTCTTGCCAAAG
CAAAGGGTGTATGGTCCACATTGCCTGTAAATGAGAAGAAATTAAATCTTGCATTTAGATCTGCAAGGAG
TGTTATATTAATATTTTCTGTCAGAGAAAGTGGAAAATTTCAAGGTTTTGCCAGATTGTCTTCAGAATCA
CACCATGGCGGATCTCCTATACACTGGGTGCTTCCAGCAGGAATGAGTGCTAAAATGCTTGGAGGTGTTT
TTAAAATAGACTGGATTTGCAGGCGTGAATTACCCTTTACTAAATCAGCTCATCTCACCAATCCCTGGAA
TGAACATAAGCCAGTAAAGATTGGACGTGATGGACAGGAAATTGAACTTGAATGTGGAACTCAGCTTTGT
CTTCTGTTTCCCCCTGATGAAAGTATTGACTTGTATCAGCTCATTCATAAAATGCGTCACAAGAGAAGAA
TGCATTCTCAGCCTCGATCAAGAGGACGTCCATCCCGTCGAGAACCAGTCCGGGATGTGGGAAGGCGTCG
ACCAGAAGATTATGATATTCATAACAGCAGAAAGAAACCAAGGATTGACTATCCCCCTGAGTTTCACCAG
AGACCAGGGTATGTAAAGGATCCCCGATACCAGGAAGTGGACAGTTTTACAAATCTTATTCCCAACAGAC
GATTTTCAGGAGTTCGCCGAGATGTGTTTTTAAATGGGTCCTACAATGATTATGTGAGGGAATTTCATAA
CATGGGACCACCGCCTCCTTGGCAAGGAATGCCTCCTTACCCGGGAATAGAACAACCTCCACACCATCCT
TACTACCAGCACCATGCCCCACCTCCTCAAGCCCACCCCCCTTACTCAGGACACCATCCGGTACCACATG
AAGCAAGATACAGAGATAAACGAGTACATGACTATGATATGAGGGTCGATGATTTCCTTCGCCGCACGCA
AGCTGTGGTCAGTGGTCGGAGAAGTAGACCTCGAGAAAGAGATCGGGAGCGAGAGCGAGACCGCCCCAGA
GATAACAGAAGAGATAGAGAGCGAGACAGAGGTCGTGATCGAGAAAGAGAGAGAGAAAGAATATGTGATC
GGGACAGAGACCGAGGGGAGAGAGGTCGTTATCGAAGATAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

**ACCN:** NM_177680

**Insert Size:** 2211 bp

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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| **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.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_177680.3, NP_808348.2 |
| **RefSeq Size:** | 3034 bp |
| **RefSeq ORF:** | 2211 bp |
| **Locus ID:** | 231386 |
| **UniProt ID:** | E9Q5K9 |
| **Cytogenetics:** | 5 E1 |
| **Gene Summary:** | Regulator of alternative splicing that specifically recognizes and binds N6-methyladenosine (m6A)-containing RNAs (By similarity). M6A is a modification present at internal sites of mRNAs and some non-coding RNAs and plays a role in the efficiency of mRNA splicing, processing and stability (By similarity). Acts as a key regulator of exon-inclusion or exon-skipping during alternative splicing via interaction with mRNA splicing factors SRSF3 and SRSF10 (By similarity). Specifically binds m6A-containing mRNAs and promotes recruitment of SRSF3 to its mRNA-binding elements adjacent to m6A sites, leading to exon-inclusion during alternative splicing (By similarity). In contrast, interaction with SRSF3 prevents interaction with SRSF10, a splicing factor that promotes exon skipping: this prevents SRSF10 from binding to its mRNA-binding sites close to m6A-containing regions, leading to inhibit exon skipping during alternative splicing (By similarity). May also regulate alternative splice site selection (By similarity). Also involved in nuclear export of m6A-containing mRNAs via interaction with SRSF3: interaction with SRSF3 facilitates m6A-containing mRNA-binding to both SRSF3 and NXF1, promoting mRNA nuclear export (By similarity). Also recognizes and binds m6A on other RNA molecules (By similarity). Involved in random X inactivation mediated by Xist RNA: recognizes and binds m6A-containing Xist and promotes transcription repression activity of Xist (By similarity). Involved in S-adenosyl-L-methionine homeostasis by regulating expression of MAT2A transcripts, probably by binding m6A-containing MAT2A mRNAs (PubMed:29262316).[UniProtKB/Swiss-Prot Function]<br>Transcript Variant: This variant (1) lacks an alternate in-frame exon and uses an alternate in-frame splice junction compared to variant 4. The resulting isoform (1) has the same N- and C-termini but is shorter compared to isoform 4. Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments. |