

## Product datasheet for **MC200730**

### **Ythdf2 (NM\_145393) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ythdf2 (NM_145393) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ythdf2
Synonyms:	9430020E02Rik; HGRG8; NY-REN-2
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >BC014797 sequence for NM\_145393  
 GCCGAGGCGAGGCTCCGAGTGTGACAGGGACAAAAGCCGCCGCCACCCCTGCTCCCGTCGTCGGGGCTC  
 ATCCGCCGCCGCCGCTGTCCCGACGAGGAGTCCGCCGCCGCTGTTCCCGTGAGGATCCGAGAGCCATGT  
 CGGCCAGCAGCCTCTTGGAGCAGAGACAAAAGGTCAAGGAAACAAAGTACAAAATGGTTCTGTGCATCA  
 AAAGGATGGACTAAATGATGATGATTTTCGAACCTTACTTGAGCCACAGGCAAGGCCGAATAATGCATAT  
 ACTGCCATGTGACTCCTACTTACCCAGTTACTACAGCCCCTCCATTGGCTTTTCTATTCTTTGGGTG  
 AAGCTGCTTGGTCTACTGGAGGTGACACAGCCATGCCCTATCTAACTTCTTATGGACAACAGCAACGG  
 AGAGCCCCACTTTCTACCAGATGCAATGTTTGGGCAACCAGGAGCCCTAGGTAGCACTCCATTTCTTGGT  
 CAGCATGGTTTTAATTTTTTCCAGTGGGATTGACTTCTCAGCATGGGAAATAACAGTTCTCAGGGAC  
 AGTCTACTCAAAGCTCTGGATATAGTAGCAATTACGCTTATGCACCCAGCTCCTTAGGTGGAGCCATGAT  
 TGATGGACAGTCAGCTTTTGCCAAATGAGACCCTCAATAAAGCTCCAGGCATGAATACTATAGACCAAGGG  
 ATGGCAGCACTGAAACTAGGTAGCACAGAAGTTGCAAGCAGTGTCCAAAAGTTGTAGGCTCTGCTGTTG  
 GTAGTGGTCCATCACTAGTAACATTGTGGCTTCTAGCAGTTGCCTCCAGCTACTATTGCTCTCCAAA  
 ACCAGCATCTTGGGCTGATATTGCTAGCAAGCCTGCAAAAACAACAGCCTAACTGAAGACCAAGAATGGC  
 ATTGCAGGATCAAGTCTCCACCACCCCAATAAAGCATAACATGGATATTGGAAGTTGGGATAACAAGG  
 GTCTGTGGCAAAAGCCCCCTCACAGGCTTGGTTCAAAATATAGGTGAGCAACCCAGGGATCTCTCA  
 GCCTGTTGGACAGCAGGCCAATAATAGCCACCAGTGGCTCAGGCATCAGTAGGGCAACAGACGCAGCCA  
 TTGCTCCACCTCCACCACAGCCTGCTCAGCTCTCAGTCCAGCAACAGGCAGCTCAGCCAACTCGTGGG  
 TAGCACCTCGGAACCGTGGCAGTGGGTTCCGGTCATAATGGGGTGGATGGTAATGGAGTAGGACAGTCTCA  
 GGGGGTCTGGATCTACTCCTCAGAGCCTCACCCGGTGTGGAGAACTTCGGTCCATTAATAACTAT  
 AACCTAAAGATTTGACTGGAATCTGAAACATGGCCGGTTCATCATTAAAGACTACTCTGAGGACG  
 ATATCCACCGTTCCATTAAGTATAATATCTGGTGCAGCACAGAGCATGGTAACAAGAGACTGGATGCCGC  
 CTATCGTCCATGAATGGGAAGGTCCTGACTTACTTTTCAGTGTCAACGGCAGTGGACACTTCTGT  
 GGAGTTGCAGAGATGAAATCTGCTGTGGACTACACACATGTGCAGGTGTGGTCCCAGGACAAATGGA  
 AGGGTCGTTTTCGATGTCAGATGGATTTTTGTGAAGGACGTTCCCAATAGCCAACCTGCGACACATTCTCT  
 AGAGAACAACGAGAATAAACAGTGACCAACTCTAGGGACACTCAGGAAGTGCCTCTGGAAAAAGCTAAG  
 CAGGTGTGAAAAATCATAGCCAGCTACAAGCACACCCTCCATTTTTGATGACTTCTCACACTATGAGA  
 AACGCCAAGAGGAAGAAGAAAGTGTAAAAAGGAACGTCAAGGTCTGGGAAATAGAAAGCGTTCTGCA  
 TAGACTGCAGCAACGGTTGCATCTCCTTATCCTAAGAGGACACGATGACCTGCAAGAAAATTAGGACTTT  
 TTTTCTTAATTTTATTGACTTCCAGAGACAATTGCAAACTTGCAGTTTATGTATTGGAATTCACAAAAGA  
 CATAGGACTTAACTGGAAAATGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

**Restriction Sites:** RsrII-NotI

**ACCN:** NM\_145393

**Insert Size:** 1740 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).

**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:** [BC014797](#), [AAH14797](#)

**RefSeq Size:** 2079 bp

**RefSeq ORF:** 1740 bp

**Locus ID:** 213541

**UniProt ID:** [Q91YT7](#)

**Cytogenetics:** 4 D2.3

**Gene Summary:** Specifically recognizes and binds N6-methyladenosine (m6A)-containing RNAs, and regulates mRNA stability (PubMed:28867294, PubMed:29855337). M6A is a modification present at internal sites of mRNAs and some non-coding RNAs and plays a role in mRNA stability and processing (PubMed:28867294, PubMed:29855337). Acts as a regulator of mRNA stability by promoting degradation of m6A-containing mRNAs via interaction with the CCR4-NOT and ribonuclease P/MRP complexes, depending on the context (PubMed:30065315, PubMed:29855337). M6A-containing mRNAs containing a binding site for RIDA/HRSP12 (5'-GGUUC-3') are preferentially degraded by endoribonucleolytic cleavage: cooperative binding of RIDA/HRSP12 and YTHDF2 to transcripts leads to recruitment of the ribonuclease P/MRP complex (By similarity). Other m6A-containing mRNAs undergo deadenylation via direct interaction between YTHDF2 and CNOT1, leading to recruitment of the CCR4-NOT and subsequent deadenylation of m6A-containing mRNAs (By similarity). Required maternally to regulate oocyte maturation: probably acts by binding to m6A-containing mRNAs, thereby regulating maternal transcript dosage during oocyte maturation, which is essential for the competence of oocytes to sustain early zygotic development (PubMed:28867294). Also involved in hematopoietic stem cells specification by binding to m6A-containing mRNAs, leading to promote their degradation (PubMed:30065315, PubMed:30150673). Also acts as a regulator of neural development by promoting m6A-dependent degradation of neural development-related mRNA targets (PubMed:29855337). Regulates circadian regulation of hepatic lipid metabolism: acts by promoting m6A-dependent degradation of PPARA transcripts (By similarity). Regulates the innate immune response to infection by inhibiting the type I interferon response: acts by binding to m6A-containing IFNB transcripts and promoting their degradation (PubMed:30559377). Also acts as a promoter of cap-independent mRNA translation following heat shock stress: upon stress, relocalizes to the nucleus and specifically binds mRNAs with some m6A methylation mark at their 5'-UTR, protecting demethylation of mRNAs by FTO, thereby promoting cap-independent mRNA translation (By similarity). [UniProtKB/Swiss-Prot Function]