

Product datasheet for **SC111488**

YTHDC1 (NM_133370) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	YTHDC1 (NM_133370) Human Untagged Clone
Tag:	Tag Free
Symbol:	YTHDC1
Synonyms:	YT521; YT521-B
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Cell Selection:	None



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Fully Sequenced ORF: >NCBI ORF sequence for NM_133370, the custom clone sequence may differ by one or more nucleotides

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ATGGCGGCTGACAGTCGGGAGGAGAAAGATGGAGAACCTAATGTTCTGGATGATATTTAACTGAAGTAC
CAGAACAAGATGATGAACTGTATAATCCAGAGAGTGAACAAGATAAAAAAGAGAAAAAGGGATCAAAAAG
AAAAAGTGATCGAATGGAATCTACTGATACCAAACGACAAAAGCCTTCTGTCCATTCAAGACAACCTGGTT
TCTAAGCCACTGAGCTCATCTGTTAGCAATAACAAAAGAATAGTTAGTACAAAAGGAAAGTCAGCCACAG
AGTATAAAAAATGAGGAATATCAAAGATCTGAAAGAAAACAAGCGTCTAGATGCTGATCGGAAAATTCGTCT
ATCAAGTAGTGCCTCCAGAGAACCTTATAAGAATCAACCTGAAAAAACCTGTGTCCGGAAAAGGGATCCT
GAAAGGAGGGCCAAATCTCCTACGCCAGATGGTTCTGAGAGAATTGGGCTTGAAGTGGATAGACGTGCAA
GCAGATCCAGCCAGTCTTCTAAGGAAGAAGTGAACCTGAAGAATATGGCTCTGACCATGAGACTGGCAG
CAGTGGTCTTCTGATGAGCAAGGGAACAACACTGAGAATGAGGAGGAAGGAGTGAAGAAGATGTGGAG
GAAGATGAAGAAGTAGAAGAAGATGCAGAAGAAGATGAAGAGGTGGATGAAGATGGAGAGGAGGAGGAGG
AAGAGGAGGAGGAGGAAGAGGAGGAGGAGGAGGAGGAAGAAGAAGATATGAACAGGATGAGAGAGACCA
GAAAGAGGAGGAAATGATTATGACACTCGAAGTGAGGCCAGTACTCTGTTCTGAATCTGTTTCCCTTC
ACAGATGGGTCTGTGATCTGGTTCAGGCACAGATGGATCAGATGAGAAAAAGAAAGGAAAGGAAGAGAG
CTAGAGGCATATCTCAAATGTTTTGATAGAAGTGAAGCTCTGCATCAGATCATATGCAGATCAAAAC
CAGTAACTCAAATATGTGCTTCAAGATGCAAGATTTTTCTCATAAAGAGTAACAACCATGAGAATGTG
TCTCTTGCCAAAGCGAAGGGTGTATGGTCCACGCTCCCTGTAATGAGAAGAAATTAATCTTGCAATTTA
GATCTGCAAGGAGTGTTATCTTAATATTTCTGTGAGAGAGTGGAAAAATTTCAAGGGTTTGAAGACT
TTCTTCAGAATCACATCACGGAGGATCTCCTATACACTGGGTGCTTCCAGCAGGAATGAGTGCTAAAAATG
CTGGGAGGTGTCTTTAAAATTGACTGGATTTGCAGGCGTGAATTACCTTCACTAAGTCGGCTCATCTCA
CCAATCCTTGGAATGAACATAAACCCAGTAAAGATCGGACGTGATGGACAGGAAATTTGAACCTTGAATGTGG
AACCCAGCTTTGTCTTCTGTTTCCCCCGATGAAAGTATTGACTTGTATCAGGTCATTCATAAAAATGCGT
CACAAGAGAAGAATGCATTCTCAGCCCCGATCACGAGGACGTCCATCCCCTCGAGAACCAGTCCGGGATG
TGGGAAGGCGTCGACCAGAAGATTATGATATTCATAACAGCAGAAAGAAACCAAGGATTGACTATCCCCC
TGAGTTTCACCAGAGACCAGGGATTTAAAGGATCCACGATACCAGGAAGTGGACAGACGATTTTCAGGA
GTTCCGCCGAGATGTGTTTTAAATGGGTCTACAATGATTATGTGAGGGAATTTCAACATGGGACCAC
CACCACCTTGGAAGGAATGCCCTTACCAGGAATGGAACAACCTCCACACCATCCTTACTATCAGCA
CCATGCTCCACCTCCTCAAGCTCATCCCCCTTACTCAGGACATCATCCAGTACCACATGAAGCAAGATAC
AGAGATAAACGAGTACATGATTATGATATGAGGGTGGATGATTTCTTCTCGCACACAAGCTGTTGTCA
GTGGCCGGAGAAGTAGACCCCGTAAAGAGACCGGGAACGAGAGCGAGACCGCCCTAGAGATAACAGACG
AGACAGAGAGCGAGATAGAGGACGTGATAGAGAAAGAGAAAGAGAGCGATTATGTGATCGAGACAGAGAC
CGAGGGGAGAGAGGTCGATATAGAAGATAA
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5' Read Nucleotide Sequence:	>OriGene 5' read for NM_133370 unedited GGGGGCAACATTTGTATACGACTCATATAGGCGGCCGCGNAATTCGCACCAGCCGCCGTC GCCATCTGTTTCCCTTCCCTCCCGCTACCTAGCCCGAGTCTGAGCCCTAACGAGAAGGCT GGGCCTAGGCCGCTGGATGCTGGAGTAAAAGGAAGGGAGAAAAGGGAAAAAGCGGGAAAGAG TCGAGAAGGCTGAGTGTTAAGAGGCCAAGTGCGACGCGCGTATCCGGGCAGACGGACTGA CGGACGGGCCCGTGCTTCTGCCGCGCTGCGGCCCGCCGCGGAGTCCGCTCTAAGCGGCCG CGGCGGTGGCAGCGGCCGAAACCGAAGGGGAGCCATGGCGGCTGACAGTCGGGAGGAGA AAGATGGAGAACTTAATGTTCTGGATGATATTTAACTGAAGTACCAGAACAAGATGATG AACTGTATAATCCAGAGAGTGAACAAGATAAAAATGAGAAAAAGGGATCAAAAAGAAAA GTGATCGAATGGAATCTACTGATACCAAACGACAAAAGCCTTCTGTCCATTCAAGACAAC TGGTTTCTAAGCCACTGAGCTCATCTGTTAGCAATAACAAAAGAATAGTTAGTACAAAAG GAAAGTCAGCCACAGAGTATAAAAATGAGGAATATCAAAGATCTGAAAGAAAACAAGCGTC TAGATGCTGATCGAAAAATTCGTCTATCAAGTAGTGCCTCCAGAGAACCTTATAAGAATC CAACCTGAAAAACCTGTGTCNCGGAAAAGGATCCTGNAAGGGAGGCCAAATCTNCTACGC CAGATGGTTCTGAGAGAATTGGCTTGAAGTGGATAGACGTGCAAGCAGATCCAGCCAGTC TTTCTAAGGAGAAGTGAACCTCTGAGATATGGCTCTGACATGAGACTGCCAGCAGTGG
Restriction Sites:	NotI-NotI
ACCN:	NM_133370
Insert Size:	4700 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:	<ol style="list-style-type: none"> 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:	<u>NM_133370.1</u> , <u>NP_588611.1</u>
RefSeq Size:	6195 bp
RefSeq ORF:	6195 bp
Locus ID:	91746
UniProt ID:	<u>Q96MU7</u>
Cytogenetics:	4q13.2
Domains:	YTH

Gene Summary:

Regulator of alternative splicing that specifically recognizes and binds N6-methyladenosine (m6A)-containing RNAs (PubMed:26318451, PubMed:26876937, PubMed:25242552, PubMed:28984244). 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 (PubMed:26318451, PubMed:25242552). Acts as a key regulator of exon-inclusion or exon-skipping during alternative splicing via interaction with mRNA splicing factors SRSF3 and SRSF10 (PubMed:26876937). 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 (PubMed:26876937). 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 (PubMed:26876937). May also regulate alternative splice site selection (PubMed:20167602). 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 (PubMed:28984244). Also recognizes and binds m6A on other RNA molecules (PubMed:27602518). Involved in random X inactivation mediated by Xist RNA: recognizes and binds m6A-containing Xist and promotes transcription repression activity of Xist (PubMed:27602518). Involved in S-adenosyl-L-methionine homeostasis by regulating expression of MAT2A transcripts, probably by binding m6A-containing MAT2A mRNAs (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) lacks an alternate in-frame exon compared to variant 1. The resulting isoform (2) has the same N- and C-termini but is shorter compared to isoform 1.

Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.