

## Product datasheet for **SC105377**

### **YTHDF1 (AK095795) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	YTHDF1 (AK095795) Human Untagged Clone
Tag:	Tag Free
Symbol:	YTHDF1
Synonyms:	C20orf21
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF within SC105377 sequence for AK095795 edited (data generated by NextGen Sequencing)

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ATGTCCGGCCACCAGCGTGGACACCCAGAGAACAAAAGGACAAGATAATAAAGTACAAAAT
GGTTTCGTTACATCAGAAGGATACAGTTCATGACAATGACTTTGAGCCCTACCTTACTGGA
CAGTCAAATCAGAGTAACAGTTACCCCTCAATGAGCGACCCCTACCTGTCCAGCTATTAC
CCGCCGTCCATTGGATTTCCCTTACTCCCTCAATGAGGCTCCGTGGTCTACTGCAGGGGAC
CCTCCGATTCATACCTACCACCTACGGACAGCTCAGTAACGGAGACCATCATTTTATG
CAGCATGCTGTTTTGGGCAGCCTGGGGCCTGGGGAACAACATCTATCAGCACAGGTTTC
AATTTTTTCCCTGAAAACCTGCGTTTCTCAGCATGGGGGACAAGTGGGTCTCAAGGTCAG
CAGACCCAGAGCTCCGCGTATGGGAGCAGCTACACCTACCCCGAGCTCCCTGGGTGGC
ACGGTGGTTGATGGGCAGCCAGGCTTTCACAGCGACACCCTCAGCAAGGCCCCCGGGATG
AACAGCCTGGAGCAGGGCATGGTTGGCCTGAAGATTGGGGACGTCAGCTCCTCCGCCGTC
AAGACGGTGGGCTCTGTCGTGAGCAGCGTGGCACTGACTGGTGTCTTTTGGCAACGGT
GGGACAAATGTGAACATGCCAGTTTCAAAGCCGACCTCGTGGGCTGCCATTGCCAGCAAG
CCTGCAAAACCACAGCCTAAAATGAAAACAAGAGCGGGCCTGTATGGGGGGTGGGCTG
CCCCCTCCACCCATAAAGCATAACATGGACATTGGCACCTGGGATAACAAGGGCCCTGTG
CCGAAGGGCCCCAGTCCCCCAGCAGGCACCCTCTCCACAGGCTGCCCCACAGCCCCAGCAG
GTGGCTCAGCCTCTCCCAGCACAGCCCCAGCTTTGGCTCAACCCGAGTATCAGAGCCCT
CAGCAGCCACCCAGACCCGCTGGGTTGCCCCACGCAACAGAAACGGCGGCTTTGGGCAG
AGCGGAGGGGCTGGCAGCGATAGCAACTCTCTGGAAACGTCACAGCTAATCTGCCCC
AGCTTCGAATCCCACCCGTCCTTGA AAAACTGAAGGCTGCTCACAGCTACAACCCGAAA
GAGTTTGAGTGGAACTGAAAAGCGGGCGTGTGTTTCATCATCAAGAGCTACTCTGAGGAC
GACATCCACCCGTCCTAATTAAGTACTCCATCTGGTGTAGCACAGAGCACGGCAACAAGCGC
CTGGACAGCGCCTTCCGCTGCATGAGCAGCAAGGGGCCGCTACCTGCTCTTCAGCGTC
AATGGGAGTGGGCATTTTTGTGGGTGGCCGAGATGAAGTCCCCCGTGGACTACGGCACC
AGTGCCGGGCTGTTGCTCAGGACAAGTGAAGGGGAAGTTTGATGTCCAGTGGATTTTT
GTAAAGGATGTACCCAATAACCAGCTCCGGCACATCAGGCTGGAGAATAACGACAACAAA
CCGGTCACAAACTCCCGGACACCCAGGAGGTGCCCTTAGAAAAAGCCAAGCAAGTGCTG
AAAATTATCAGTTCCTACAAGCACACAACCTCCATCTTCNACGACTTTGCTCACTACGAG
AAGCGCCAGGAGGAGGAGGTGGTGCGAAGGAACGGCAGAGTCGAAACAAACAATGA
    
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Clone variation with respect to AK095795.1  
1600 a=>n

**5' Read Nucleotide Sequence:**

>OriGene 5' read for AK095795 unedited

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GCACGAGGGGAGTCTAACACGTGCGCGAGTCGGGGGCTCGCACGAAAGCCGCGTGGCGC
AATGGAGGTGAAGGCCGGCGCCTCGCCGGCCGAGGTGGGATCCCGAGGCCTCTCCAGTC
CGGCCCGCGTCTAGTTGTTTCATGAAGCATGTCCGCCACCAGCGTGGACCCAGAGAAC
AAAAGGACAAGATAATAAAGTACAAAATGGTTCGTTACATCAGAAGGATACAGTTCATGA
CAATGACTTTGAGCCCTACCTTACTGGACAGTCAAATCAGAGTAACAGTTACCCCTCAAT
GAGCGACCCCTACCTGTCCAGCTATTACCCGCCGTCATTGGATTTCTTACTCCCTCAA
TGAGGCTCCGTGGTCTACTGCAGGGGACCCTCCGATTCCATACCTACCACCTACGGACA
GCTCAGTAACGGAGACCATCATTTTATGCACGATGCTGTTTTTGGGCAGCCTGGGGCCT
GGGGAACAACATCTATCAGCACAGGTTCAATTTTTTCCCTGAAAACCTGCGTTCTCAGC
ATGGGGGACAAGTGGGTCTCAAGGTCAGCAGACCCAGAGCTCCGCGTATGGGAGCAGCTA
CACCTACCCCGAGCTCCCTGGGTGGC
    
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<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for AK095795 unedited NNNTTTAGCTTGGACCGCGGGCCGCAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTGCTA AATAGTATTGTTTATTAAGGCTTGTATTCTCCTAGAGGAAAAACCAATGTCGTCCAGGA CTCCATTACAGGCAGTAACAGTTCAGAGGAAGTGACACGCTCTAAATACAAGTCTAATGAT ACAGCTGAAACGTTAACTCAGAGGGTCTTTGGAGCAAGTAGTTTTTCAGAAAGCGTCTGC TCTCTAGGACGGTAAGGATCCTCTACAAGGGCACGTGCAGATCCAGGCGCTGGAGCGTCA GGCATGGGCACCATTTTCATGCTTCAACTCAAACCTCCAGGTGGTAGTGAGCTCAACGGTC CCTCATCCACAAAACATGACAGCAAATTCATCTTCTAAAAAAGTTTTGTTTTGTTTT ACCCATCAACAGGAAAAAAATTAGACACACACGATGAAATTTACAACCAGCAGCATCA TCCATCACACTGTCTGTACTACCAGATCCTACACTTAAAGCTCAGCATTATTGGTATAAA AACTTAAGACGGCATTAGAATTCCTAAGAAAAGGTGTAATTTAAAAAGATGTGCAAAC AACAAAGAATGCCCGACCCTGAACCAGACCTAAAGCACCTCCAGTTCCTCCACACATCA TGCCCCAACACCATCCAGCCCAATCGGACACCAGGACAGTGAGGGACGGGTGGCTGTTC NTGGGCAACAGATCTGGAAGGAAAGATTNTCAAAAAAAAAAAGTGTCTGCCAAATTTG AAAATTTAAAAAGTATCTGTCTAGCAGAAAATCAAATGGGGTAATTAGCACTTTAGACCGA TNNACAGATATANAATGACCAATCAGAATGGACANNAANTCCTTAACTTTTTGATTNCA GTATTTNCAAAGAGATNNTATCAGAATACTCTAAATGACAAAATGACTCATGGG
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	AK095795
<b>Insert Size:</b>	3110 bp
<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">AK095795.1</a> , <a href="#">BAG53130.1</a>
<b>RefSeq Size:</b>	2967 bp
<b>RefSeq ORF:</b>	2967 bp
<b>Locus ID:</b>	54915
<b>Cytogenetics:</b>	20q13.33
<b>Domains:</b>	YTH

**Gene Summary:**

Specifically recognizes and binds N6-methyladenosine (m6A)-containing mRNAs, and promotes mRNA translation efficiency (PubMed:24284625, PubMed:26046440, PubMed:26318451). 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:24284625). Acts as a regulator of mRNA translation efficiency: promotes ribosome loading to m6A-containing mRNAs and interacts with translation initiation factors eIF3 (EIF3A or EIF3B) to facilitate translation initiation (PubMed:26046440). Required to facilitate learning and memory formation in the hippocampus by enhancing protein synthesis upon neuronal stimulation: in response to neuronal stimulation, binds to m6A-containing neuronal mRNAs, promoting their translation, thereby contributing to learning and memory (By similarity). Acts as a regulator of axon guidance by binding to m6A-containing ROBO3 transcripts, thereby promoting their translation (By similarity). Acts as a negative regulator of antigen cross-presentation in myeloid dendritic cells (By similarity). Acts by binding and promoting translation of m6A-containing transcripts encoding proteins involved in lysosomal degradation and phagosome maturation, leading to increased antigen degradation in myeloid dendritic cells (By similarity). In the context of tumorigenesis, negative regulation of antigen cross-presentation limits the anti-tumor response by reducing efficiency of tumor-antigen cross-presentation (By similarity).[UniProtKB/Swiss-Prot Function]