

Product datasheet for **MR208856**

Ythdf1 (NM_173761) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ythdf1 (NM_173761) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ythdf1
Synonyms:	2210410K23Rik; 8030473O16
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR208856 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCGGCCACCAGCGTGGACCCAGAGAACAAAGGACAAGATAATAAAGTACAAAATGGTTCTTTGC
 ATCAGAAGGATGCAGTTCATGACAATGACTTTGAGCCCTACCTTTCTGGACAGTCCAATCCGAGTAACAG
 TTACCCCTCGATGAGTGATCCTTACCTGTCCAGTTACTATCCACCATCCATTGGATTTCCTTACTCCCTC
 AGCGAGGCACCATGGTCCACTGCAGGGGACCCTCCCATCCCGTATCTCACTACCTATGGACAACCTTAGTA
 ATGGAGACCATCACTTTCATGCATGATGCTGTTTTGGGCAGCCTGGGGTCTGGGGAACAACATTTACCA
 GCACAGGTTTAAATTTTTCCCTGAAAACCTGCATTCTCAGCATGGGGGACAAGTGGTTCTCAGGGGCAG
 CAGACTCAGAGCTCAGCCTATGGGAGCAGTTACACTTACCCACCTAGCTCCCTTGGTGGCACAGTTGTTG
 ATGGGCAGACAGGTTTTACAGTACTCCCTCAACAAGGCCCTGGGATGAACAGTCTGGAGCAGGGCAT
 GGTGTTGGCTGAAGATTGGGGATGTTACACCTCTGCAGTTAAGACGGTGGTTTCAGTTGCAACAGTGTG
 GCACTGACTGGTGTCTTTCTGGCAATGGTGGGACAAATGTAAACATGCCAGTTTCAAAACCAACTTCAT
 GGGCAGCCATTGCTAGCAAGCCTGCAAAACCACAGCCTAAGATGAAAACAAGAGTGGGCCGATAGTTGG
 GGGTGCCTCCTCCTCCCTATCAAGCATAACATGGACATTGGTACTTGGGATAACAAGGGCCCTGCT
 CCAAAGGCCTCCGCCCCAGCAGACACCATCCCCCAGGCTGCCCCACAGCCCCAGCAGGTAGCTCAAC
 CTCTCCCTGTTACGCCCCACCTTTGGTCCAGCCACAGTATCAGAGCCCTCAGCAGCCACTTCAACCCCG
 CTGGGTGGCTCCTCGAAACAGAAATGCAGCATTGGGCAGAGTGGAGGGGCAACAGTGCAGTAACCTCT
 CCCACAGCTATAACCCTAAAGAGTTCGACTGGAATCTTAAGAGTGGCGGGTGTTCATCATCAAGAGCTA
 TTCTGAGGACGACATCCACCGCTCCATCAAGTACTCCATCTGGTGTAGTACTGAACACGGCAACAAGCGC
 CTGGACGGCGCCTTCCGCTCCATGAGCAGCAAGGGGCCTGTTTATCTCCTCTTCACTGTCATGGGAGTG
 GACATTTCTGTGGGTGGCAGAGATGAAGTCCCCTGTGGACTACGGCACCAGCGCTGGGGTCTGGTCTCA
 GGACAAGTGAAGGGAAAGTTTGTGATGTAAGTGGATTTTTGTGAAGGATGTGCCCAACAACAGCTGCGG
 CACATCAGACTGGAGAATAACGACAACAACCTGTCAAACTCCCGTATACACAGGAGGTGCCCTTAG
 AAAAAGCAAAACAAGTGTGAAGATTATCGTTCTATAAGCACACAACCTCTATCTTTGACGACTTTTC
 TCATTATGAGAAGCGCCAGGAGGAAGAGGAGTGGTGCCTAAGGAAAGACAGAATCGAAACAACAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR208856 protein sequence
 Red=Cloning site Green=Tags(s)

MSATSVDPQRTKQDNKVNQNSLHQKDAVHDNDFEPYLSGQSNPSNSYPSMSDPYLSYYPSPSIGFPYSL
 SEAPWSTAGDPPIPYLTTYGQLSNGDHHFMHDAVFGQPGGLGNNIYQHRFNFFPENPAFSAWGTSGSQGQ
 QTQSSAYGSSYTYPPSSLGGTVVDGQTGFHSDSLNKAPGMNSLEQGMVGLKIGDVTTSAVKTVGSVNSV
 ALTGVL SNGGTVNMPVSKPTSWAAIASKPAKQPKMKTKSGPIVGGALPPPIKHNMDIGTWDNKGPA
 PKASAPQQTSPQAAPQPQQAQPLPVQPPPLVQPQYQSPQQLQPRWVAPRRNNAAFGQSGGANSNSNS
 VGNAQPTSAPSVESHVLEKLAHNSYNPKEFDWNLKSGRVFIIKSYSEDDIHRSIKYSIWCSTEHGNKR
 LDGAFRSMSSKGPVYLLFSVNGSGHFCGVAEMKSPVDYGTSAVWSQDKWKGFVKWIFVKDVPNNQLR
 HIRLENNDNKPVNSRDTQEVPLEKAKQVLKIIASYKHTTSIFDDF SHYEKRQEEEEVVRKERQNRNKQ

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_173761

ORF Size: 1680 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 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](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

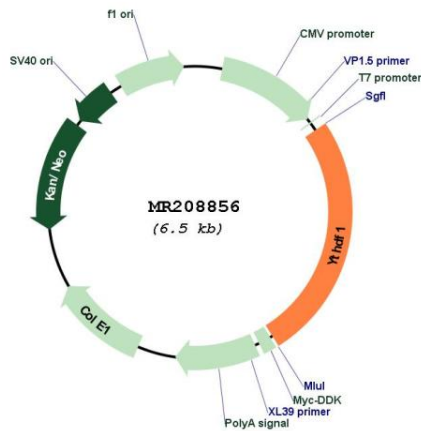
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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_173761.3, NP_776122.1](#)
RefSeq Size: 3199 bp
RefSeq ORF: 1680 bp
Locus ID: 228994
UniProt ID: [P59326](#)
Cytogenetics: 2 H4
MW: 60.9 kDa

Gene Summary: Specifically recognizes and binds N6-methyladenosine (m6A)-containing mRNAs, and promotes mRNA translation efficiency (PubMed:30401835). 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:30401835). 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 (By similarity). 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 (PubMed:30401835). Acts as a regulator of axon guidance by binding to m6A-containing ROBO3 transcripts, thereby promoting their translation (PubMed:30843071). Acts as a negative regulator of antigen cross-presentation in myeloid dendritic cells (PubMed:30728504). 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 (PubMed:30728504). In the context of tumorigenesis, negative regulation of antigen cross-presentation limits the anti-tumor response by reducing efficiency of tumor-antigen cross-presentation (PubMed:30728504).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR208856