

Product datasheet for **RC223846**

MMACHC (NM_015506) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | MMACHC (NM_015506) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | MMACHC |
| Synonyms: | cbIC |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| ORF Nucleotide Sequence: | >RC223846 representing NM_015506 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAGCCGAAAGTCGCAGAGCTGAAGCAGAAGATCGAGGACACGCTATGTCCTTTGGCTTCGAGGTTT
ACCCCTCCAGGTGGCATGGTACAATGAACTCTTGCTCCAGCCTTCCACCTACCGCTGCCAGGACCTAC
CCTGGCTTCTGGTACTCAGCACGCCTGCCATGTTTGACCGGGCCCTCAAGCCCTTCTTGCAGAGCTGC
CACCTCCGAATGCTGACTGACCCAGTGGACCAGTGTGTGGCTACCATCTGGGCCGTGTAGAGAGAGCC
TCCCAGAGCTGCAGATAGAAATCATTGCTGACTACGAGGTGCACCCCAACCGACGCCCAAGATCCTGGC
CCAGACAGCAGCCATGTAGCTGGGGCTGCTTACTACTACCAACGACAAGATGTGGAGGCTGACCCATGG
GGGAACCGAGCATATCAGGTGTGTGCATACACCCCGATTTGGGGCTGGTTTGCCATCCGAGGGGTAG
TGCTGCTGCCAGGGATAGAGGTGCCAGATCTGCCACCCAGAAAACCTCATGACTGTGTACCTACAAGAGC
TGACCGTATCGCCCTACTCGAAGGCTTCAATTTCCACTGGCGTGATTGGACTTACCGGGATGCTGTGACA
CCCCAGGAGCGCTACTCAGAAGAGCAGAAGGCCTACTTCTCCACTCCACCTGCCAACGATTGGCCCTAT
TGGGCTTGGCTCAGCCCTCAGAGAAGCCTAGTTCTCCCTCCCGGACCTTCCCTTACCACACCCGCCCC
CAAGAAGCCTGGGAATCCAGCAGAGCCCGGAGCTGGCTCAGCCCCAGGGTCTCACCACCTGCATCCCT
GGCCCT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC223846 representing NM_015506
Red=Cloning site Green=Tags(s)

MEPKVAELKQKIEDTLCPFGFEVYPFQVAWYNELLPAPFHLPLPGPTLAFVLVSTPAMFDRALKPFLQSC
 HLRMLTDPVDQCVAYHLGRVRESLPELQIEIIADYEVHPNRRPKILAQTAHVAGAAAYYQRQDVEADPW
 GNQRISGVCIHPRFGGWF AIRGVLLPGIEVPDLPPRKP HDCVPTRADRIALLEGFNHWRDWTYRDAVT
 PQERYSEEQKAYFSTPPAQRLALLGLAQPSEKSPSPDLPFTTPAPKKGNPSRARSWLSPRVSPASP
 GP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg2413_g04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_015506

ORF Size: 846 bp

OTI Disclaimer: 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_015506.3](#)

RefSeq Size: 2247 bp

RefSeq ORF: 849 bp

Locus ID: 25974

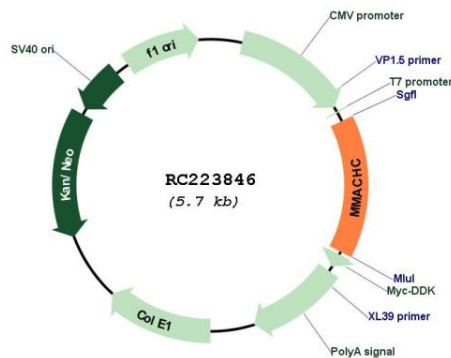
UniProt ID: [Q9Y4U1](#)

Cytogenetics: 1p34.1

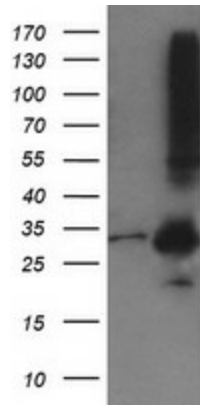
MW: 31.5 kDa

Gene Summary: The exact function of the protein encoded by this gene is not known, however, its C-terminal region shows similarity to TonB, a bacterial protein involved in energy transduction for cobalamin (vitamin B12) uptake. Hence, it is postulated that this protein may have a role in the binding and intracellular trafficking of cobalamin. Mutations in this gene are associated with methylmalonic aciduria and homocystinuria type cb1C. [provided by RefSeq, Oct 2009]

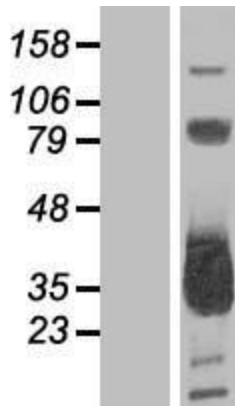
Product images:



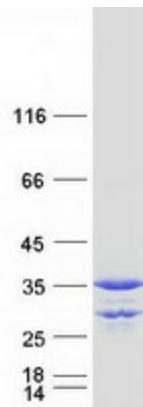
Circular map for RC223846



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MMACHC (Cat# RC223846, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MMACHC(Cat# [TA504954]). Positive lysates [LY402444] (100ug) and [LC402444] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY402444]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223846 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MMACHC protein (Cat# [TP323846]). The protein was produced from HEK293T cells transfected with MMACHC cDNA clone (Cat# RC223846) using MegaTran 2.0 (Cat# [TT210002]).