

Product datasheet for **RC228388**

HMGCS2 (NM_001166107) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HMGCS2 (NM_001166107) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HMGCS2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC228388 representing NM_001166107
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCAGCGTCTGTTGACTCCAGTGAAGCGCATTCTGCAACTGACAAGAGCGGTGCAGGAAACCTCCCTCA
 CACCTGCTCGCCTGCTCCAGTAGCCACCAAAGGTTTTCTACAGCCTCTGCTGTCCCCCTGGCCAAAAC
 AGATACTTGCCAAAGGACGTGGGCATCCTGGCCCTGGAGGTCTACTTCCAGCCCAATATGTGGACCAA
 ACTGACCTGGAGAAGTATAACAATGTGGAAGCAGGAAAGTATACAGTGGGCTTGGCCAGACCCGTATGG
 GCTTCTGCTCAGTCCAAGAGGACATCAACTCCCTGTGCCTGACGGTGGTGAACGGCTGATGGAGCGCAT
 ACAGCTCCCATGGGACTCTGTGGCAGGCTGGAAGTAGGCACTGAGACCATATTGACAAGTCCAAAGCT
 GTCAAAACAGTGTCTATGGAACCTTCCAGGATTCAGGCAATACTGATATTGAGGGCATAGATACCACCA
 ATGCCTGTACGGTGGTACTGCCTCCCTCTTCAATGCTGCCAACTGGATGGAGTCCAGTTCCTGGGATGG
 GCTGAGGGGAACCCATATGGAGAATGTGTATGACTTCTACAAACCAAATTTGGCCTCGGAGTACCCAATA
 GTGGATGGGAAGCTTTCATCCAGTGTACTTGGGGCCTTGGATCGATGTTACACATCATACCGTAAAA
 AAATCCAGAATCAGTGGGAAGCAAGCTGGCAGCGATCGACCTTACCCTTGACGATTTACAGTACATGAT
 CTTTCATACACCTTTTGAAGATGGTCCAGAAGTCTCTGGCTCGCCTGATGTTCAATGACTTCCTGTCA
 GCCAGCAGTGACACAAAACAGCTTATAAAGGGGCTGGAGGCTTTCGGGGGGCTAAAGCTGGAAGACA
 CCTACACCAACAAGGACCTGGATAAAGCACTTCTAAAGGCTCTCAGGACATGTTTCGACAAGAAAACCAA
 GGCTTCCCTTTACCTCTCCACTCACAATGGGAACATGTACACCTCATCCCTGTACGGGTGCCTGGCCTCG
 CTTCTGTCCCACCCTCTGCCAAGAAGTGGCTGGCTCCAGGATGGTGCCTTCTTATGGCTCTGGTT
 TAGCAGCAAGTTCTTTTTCAATTCGAGTATCCAGGATGCTGCTCCAGGCTCTCCCTGGACAAGTTGGT
 GTCCAGCACATCAGACCTGCCAAAACGCCTAGCCTCCCGAAAGTGTGTCTCCTGAGGAGTTCACAGAA
 ATAATGAACCAAAGAGAGCAATTCTACCATAAGGTGAATTTCTCCCCACCTGGTACACAAAACAGCCTT
 TCCAGGTAAGTGGTACCTGGAGCGAGTGGACGAGCAGCATCGCCGAAAGTATGCCCGCGCTCCCGTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC228388 representing NM_001166107
 Red=Cloning site Green=Tags(s)

MQRLLTPVKRILQLTRAVQETSLTPARLLPVAHQRFSTASAVPLAKTDTWPKDVGILALEVYFPAQYVDQ
 TDLEKYNVEAGKYTVGLGQTRMGFCSVQEDINSLCLTVVQRLMERIQLPWDSVGRLEVTETIIDKSKA
 VKTVLMELFQDSGNTDIEGIDTTNACYGGTASLFNAANWMESSWDGLRGTHMENVYDFYKPNLASEYPI
 VDGKLSIQCYLRALDRCYTSYRKKIQNQWKQAGSDRPFLLDDLQYMIHFTHPFCKMVQKSLARLMFNDFLS
 ASSDTQTSLYKGLEAFGLKLEDYTNKDLKALLKASQDMFDKKTASLYLSTHNGNMYTSSLYGCLAS
 LLSHSAQELAGSRIGAFSYGSLAASFFSFRVSQDAAPGSPLDKLVSSSDLPKRLASRKCVSPEEFTE
 IMMQRQFYHKVNFSPPGDNTSLFPGTWYLERVDEQHRRYARRPV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8038_d10.zip

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_001166107

ORF Size: 1398 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.

RefSeq: [NM_001166107.1](#), [NP_001159579.1](#)

RefSeq ORF: 1401 bp

Locus ID: 3158

UniProt ID: [P54868](#)

Cytogenetics: 1p12

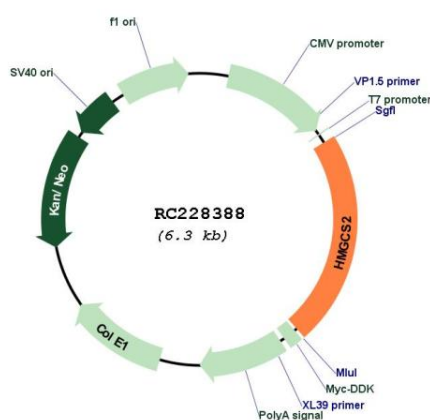
Protein Families: Druggable Genome

Protein Pathways: Butanoate metabolism, Metabolic pathways, PPAR signaling pathway, Synthesis and degradation of ketone bodies, Terpenoid backbone biosynthesis, Valine, leucine and isoleucine degradation

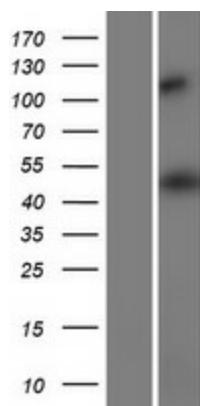
MW: 52.48 kDa

Gene Summary: The protein encoded by this gene belongs to the HMG-CoA synthase family. It is a mitochondrial enzyme that catalyzes the first reaction of ketogenesis, a metabolic pathway that provides lipid-derived energy for various organs during times of carbohydrate deprivation, such as fasting. Mutations in this gene are associated with HMG-CoA synthase deficiency. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Oct 2009]

Product images:



Circular map for RC228388



Western blot validation of overexpression lysate (Cat# [LY431416]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC228388 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).