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# Product datasheet for RG208128

## HMGCS2 (NM_005518) Human Tagged ORF Clone

### Product data:

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|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | HMGCS2 (NM_005518) Human Tagged ORF Clone |
| **Tag:** | TurboGFP |
| **Symbol:** | HMGCS2 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-AC-GFP (PS100010) |
| **E. coli Selection:** | Ampicillin (100 ug/mL) |

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**ORF Nucleotide Sequence:**

>RG208128 representing NM_005518
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCAGCGTCTGTTGACTCCAGTGAAGCGCATTCTGCAACTGACAAGAGCGGTGCAGGAAACCTCCCTCA
CACCTGCTCGCCTGCTCCCAGTAGCCCACCAAAGGTTTTCTACAGCCTCTGCTGTCCCCCTGGCCAAAAC
AGATACTTGGCCAAAGGACGTGGGCATCCTGGCCCTGGAGGTCTACTTCCCAGCCCAATATGTGGACCAA
ACTGACCTGGAGAAGTATAACAATGTGGAAGCAGGAAAGTATACAGTGGGCTTGGGCCAGACCCGTATGG
GCTTCTGCTCAGTCCAAGAGGACATCAACTCCCTGTGCCTGACGGTGGTGCAACGGCTGATGGAGCGCAT
ACAGCTCCCATGGGACTCTGTGGGCAGGCTGGAAGTAGGCACTGAGACCATCATTGACAAGTCCAAAGCT
GTCAAAACAGTGCTCATGGAACTCTTCCAGGATTCAGGCAATACTGATATTGAGGGCATAGATACCACCA
ATGCCTGCTACGGTGGTACTGCCTCCCTCTTCAATGCTGCCAACTGGATGGAGTCCAGTTCCTGGGATGG
TCGTTATGCCATGGTGGTCTGTGGAGACATTGCCGTCTATCCCAGTGGTAATGCTCGTCCCACAGGTGGG
GCCGGAGCTGTGGCTATGCTGATTGGGCCCAAGGCCCCTCTGGCCCTGGAGCGAGGGCTGAGGGGAACCC
ATATGGAGAATGTGTATGACTTCTACAAACCAAATTTGGCCTCGGAGTACCCAATAGTGGATGGGAAGCT
TTCCATCCAGTGCTACTTGCGGGCCTTGGATCGATGTTACACATCATACCGTAAAAAAATCCAGAATCAG
TGGAAGCAAGCTGGCAGCGATCGACCCTTCACCCTTGACGATTTACAGTACATGATCTTTCATACACCCT
TTTGCAAGATGGTCCAGAAGTCTCTGGCTCGCCTGATGTTCAATGACTTCCTGTCAGCCAGCAGTGACAC
ACAAACCAGCTTATATAAGGGGCTGGAGGCTTTCGGGGGGCTAAAGCTGGAAGACACCTACACCAACAAG
GACCTGGATAAAGCACTTCTAAAGGCCTCTCAGGACATGTTCGACAAGAAAACCAAGGCTTCCCTTTACC
TCTCCACTCACAATGGGAACATGTACACCTCATCCCTGTACGGGTGCCTGGCCTCGCTTCTGTCCCACCA
CTCTGCCCAAGAACTGGCTGGCTCCAGGATTGGTGCCTTCTCTTATGGCTCTGGTTTAGCAGCAAGTTTC
TTTTCATTTCGAGTATCCCAGGATGCTGCTCCAGGCTCTCCCCTGGACAAGTTGGTGTCCAGCACATCAG
ACCTGCCAAAACGCCTAGCCTCCCGAAAGTGTGTGTCTCCTGAGGAGTTCACAGAAATAATGAACCAAAG
AGAGCAATTCTACCATAAGGTGAATTTCTCCCCACCTGGTGACACAAACAGCCTTTTCCCAGGTACTTGG
TACCTGGAGCGAGTGGACGAGCAGCATCGCCGAAAGTATGCCCGGCGTCCCGTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

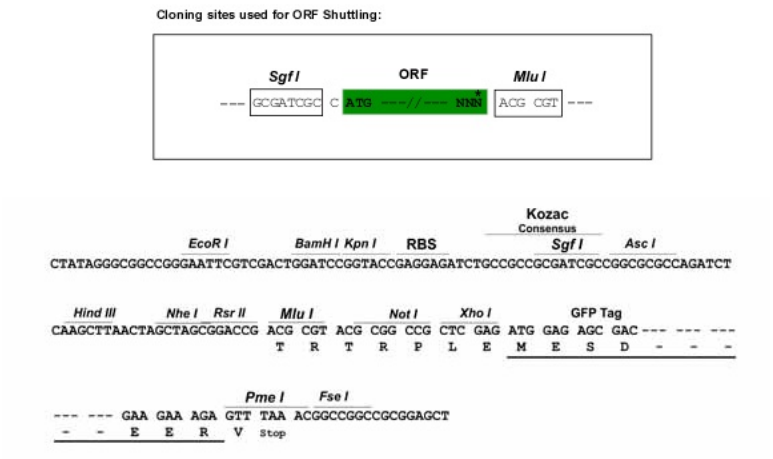
>RG208128 representing NM_005518
Red=Cloning site Green=Tags(s)

MQRLLTPVKRILQLTRAVQETSLTPARLLPVAHQRFSTASAVPLAKTDTWPKDVGILALEVYFPAQYVDQ
TDLEKYNNVEAGKYTVGLGQTRMGFCSVQEDINSLCLTVVQRLMERIQLPWDSVGRLEVGTETIIDKSKA
VKTVLMELFQDSGNTDIEGIDTTNACYGGTASLFNAANWMESSSWDGRYAMVVCGDIAVYPSGNARPTGG
AGAVAMLIGPKAPLALERGLRGTHMENVYDFYKPNLASEYPIVDGKLSIQCYLRALDRCYTSYRKKIQNQ
WKQAGSDRPFTLDDLQYMIFHTPFCKMVQKSLARLMFNDFLSASSDTQTSLYKGLEAFGGLKLEDTYTNK
DLDKALLKASQDMFDKKTKASLYLSTHNGNMYTSSLYGCLASLLSHHSAQELAGSRIGAFSYGSGLAASF
FSFRVSQDAAPGSPLDKLVSSTSDLPKRLASRKCVSPEEFTEIMNQREQFYHKVNFSPPGDTNSLFPGTW
YLERVDEQHRRKYARRPV

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

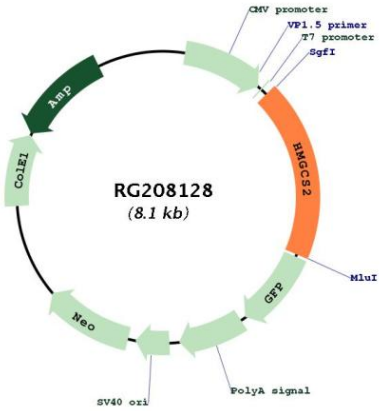
**Cloning Scheme:**




| | |
|---|---|
| **ACCN:** | NM_005518 |
| **ORF Size:** | 1524 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.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_005518.4 |
| **RefSeq Size:** | 2082 bp |
| **RefSeq ORF:** | 1527 bp |
| **Locus ID:** | 3158 |
| **UniProt ID:** | P54868 |
| **Cytogenetics:** | 1p12 |

| | |
|---|---|
| **Domains:** | HMG_CoA_synt |
| **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 |
| **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 RG208128