

## Product datasheet for **RG228388**

### HMGS2 (NM\_001166107) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	HMGS2 (NM_001166107) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	HMGS2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG228388 representing NM_001166107 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCAGCGTCTGTTGACTCCAGTGAAGCGCATTCTGCAACTGACAAGAGCGGTGCAGGAAACCTCCCTCA  
CACCTGCTCGCCTGCTCCAGTAGCCACCAAAGGTTTTCTACAGCCTCTGCTGTCCCCCTGGCCAAAAC  
AGATACTTGGCCAAAGGACGTGGGCATCCTGGCCCTGGAGGTCTACTTCCCAGCCCAATATGTGGACCAA  
ACTGACCTGGAGAAGTATAACAATGTGGAAGCAGGAAAGTATACAGTGGGCTTGGCCAGACCCGTATGG  
GCTTCTGCTCAGTCCAAGAGGACATCAACTCCCTGTGCCTGGTGGTGAACGGCTGATGGAGCGCAT  
ACAGCTCCCATGGGACTCTGTGGCAGGCTGGAAGTAGGCACTGAGACCATTGACAAGTCCAAGCT  
GTCAAAACAGTGCTCATGGAACCTTCCAGGATTCAGGCAATACTGATATTGAGGGCATAGATAACCA  
ATGCCTGCTACGGTGGTACTGCCTCCCTCTTCAATGCTGCCAACTGGATGGAGTCCAGTTCCTGGGATGG  
GCTGAGGGGAACCCATATGGAGAATGTGTATGACTTCTACAAACCAAAATTTGGCCTCGGAGTACCCAATA  
GTGGATGGGAAGCTTTCCATCCAGTGTACTTGCAGGCTTGGATCGATGTTACACATCATAACCGTAAAA  
AAATCCAGAATCAGTGAAGCAAGCTGGCAGCGATCGACCCTTACCCTTGACGATTTACAGTACATGAT  
CTTTCATACACCCTTTTGAAGATGGTCCAGAAGTCTCTGGCTCGCCTGATGTTCAATGACTTCCTGTCA  
GCCAGCAGTGACACAAAACAGCTTATATAAGGGGCTGGAGGCTTTCGGGGGGCTAAAGCTGGAAGACA  
CCTACACCAACAAGGACCTGGATAAAGCACTTCTAAAGGCTCTCAGGACATGTTTCGACAAGAAAACCAA  
GGCTTCCCTTTACCTCTCCACTCACAATGGGAACATGTACACCTCATCCCTGTACGGGTGCCTGGCCTCG  
CTTCTGTCCCACCACTCTGCCAAGAAGCTGGTGGCTCCAGGATTTGGTGCCTTCTCTTATGGCTCTGGTT  
TAGCAGCAAGTTTCTTTTCATTTTCGAGTATCCCAGGATGCTGCTCCAGGCTCTCCCTGGACAAGTTGGT  
GTCCAGCACATCAGACCTGCCAAAACGCCTAGCCTCCCGAAAAGTGTGTCTCCTGAGGAGTTACAGAA  
ATAATGAACCAAGAGAGCAATTCTACCATAAGGTGAATTTCTCCCCACCTGGTGACACAAAACAGCCTTT  
TCCAGGTACTTGGTACCTGGAGCGAGTGGACGAGCAGCATCGCCGAAAGTATGCCCGGCGTCCCCTGC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



**Protein Sequence:** >RG228388 representing NM\_001166107  
Red=Cloning site Green=Tags(s)

MQRLLTPVKRILQLTRAVQETSLTPARLLPVAHQRFSTASAVPLAKTDTWPKDVGILALEVYFPAQYVDQ  
 TDLEKYNVVEAGKYTVGLGQTRMGFCSVQEDINSLCLTVVQRLMERIQLPWDSVGRLEVTETIIDKSKA  
 VKTVLMELFQDSGNTDIEGIDTTNACYGGTASLFNAANWMESSWDGLRGTHMENVYDFYKPNLASEYPI  
 VDGLKLSIQCYLRALDRCYTSYRKKIQNQWKQAGSDRPFLLDDLQYMI FHTPFCKMVQKSLARLMFNDFLS  
 ASSDTQTSLYKGLEAFGGLKLEDYTNKDLDKALLKASQDMFDKKTAKSLYLSTHNGNMYTSSLYGCLAS  
 LLSHSAQELAGSRIGAFSYGSLAASFVSRVSDAAPGSPDLKLVSSSTSDLPKRLASRKCVSPEEFTE  
 IMMQRQEFYHKVNFSPPGDNTSLFPGTWYLERVDEQHRRYARRPV

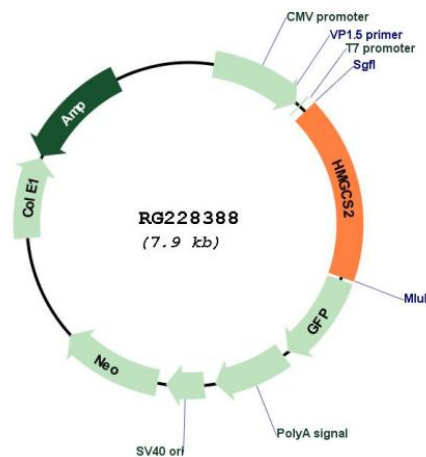
TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



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. <a href="#">More info</a>
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:	<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>
RefSeq:	<a href="#">NM_001166107.1</a> , <a href="#">NP_001159579.1</a>
RefSeq Size:	2351 bp
RefSeq ORF:	1401 bp
Locus ID:	3158
UniProt ID:	<a href="#">P54868</a>
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
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]