

Product datasheet for **RG208588**

MTHFR (NM_005957) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MTHFR (NM_005957) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MTHFR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide
Sequence:**

>RG208588 representing NM_005957
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGTGAACGAAGCCAGAGGAAACAGCAGCCTCAACCCCTGCTTGGAGGGCAGTGCCAGCAGTGGCAGTG
 AGAGCTCAAAGATAGTTTCGAGATGTTCCACCCGGGCCTGGACCCTGAGCGGCATGAGAGACTCCGGGA
 GAAGATGAGGCGCGATTGGAATCTGGTACAAGTGGTTCTCCCTGGAATTCTTCCCTCCTCGAACTGCT
 GAGGGAGCTGTAATCTCATCTCAAGTTTGACCGGATGGCAGCAGGTGGCCCCCTACATAGACGTGA
 CCTGGCACCCAGCAGGTGACCCTGGCTCAGACAAGGAGACCTCCTCCATGATGATCGCCAGCACCCCGT
 GAACTACTGTGGCTGGAGACCATCCTGCACATGACCTGCTGCCGTGAGCGCCTGGAGGAGATCACGGGC
 CATCTGCACAAAGCTAAGCAGCTGGGCCTGAAGAACATCATGGCGCTGCGGGGAGACCAATAGGTGACC
 AGTGGGAAGAGGAGGAGGGAGGTTCAACTACGCAGTGGACCTGGTGAAGCACATCCGAAGTGAAGTTGG
 TGACTACTTTGACATCTGTGTGGCAGGTTACCCAAAGGCCACCCGAAGCAGGGAGCTTTGAGGCTGAC
 CTGAAGCACTTGAAGGAGAAGGTGTCTGCGGGAGCCGATTCATCATCACGCAGCTTTTCTTTGAGGCTG
 ACACATTTCTCCGCTTTGTGAAGGCATGCACCGACATGGGCATCACTTGCCCCATCGTCCCCGGGATCTT
 TCCCATCCAGGGTACCCTCCCTTCGGCAGCTTGTGAAGCTGTCCAAGCTGGAGGTGCCACAGGAGATC
 AAGGACGTGATTGAGCCAATCAAAGACAACGATGCTGCCATCCGCAACTATGGCATCGAGCTGGCCGTGA
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 GGCTACCACAGAGGTGCTGAAGCGCCTGGGGATGTGGACTGAGGACCCAGGCGTCCCCTACCCTGGGCT
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 AGTTTTTCACTTCCCGCAGACAGCGGAAGCACTTCTGCAAGTGTGAAGAAGTACGAGCTCCGGGTTAA
 TTACCACCTTGCAATGTGAAGGTGAAAACATACCAATGCCCTGAACTGCAGCCGAATGCTGTCAT
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 AGGACGAGGCCTTTGCCCTGTGGATTGAGCAGTGGGGAAAGCTGTATGAGGAGGAGTCCCCGTCCCGCAC
 CATCATCCAGTACATCCACGACAATACTTCTGGTCAACCTGGTGGACAATGACTTCCCCTGGACAAC
 TGCTCTGGCAGGTGGTGAAGACACATTGGAGCTTCTCAACAGGCCACCCAGAATGCGAGAGAAACGG
 AGGCTCCA

ACCGGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG208588 representing NM_005957
 Red=Cloning site Green=Tags(s)

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MVNEARGNSSLNPCLEGSASSGSESSKSSRCSTPGLDPERHERLREKMRRRLESGDKWFSLEFFPPRTA
EGAVNLISRFDRMAAGGPLYIDVTWHPAGDPGSDKETSSMMIASTAVNYCGLETILHMTCCRQRLEEITG
HLHKAKQLGLKNIMALRGDPIGDQWEEEEEKGFNYAVDLVKHIRSEFGDYFDICVAGYPKGHPEAGSFEAD
LKHLKEKVSAGADFIIITQLFFEADTFFRFVKACTDMGITCPIVPGIFPIQGYHSLRQLVKLSKLEVPQEI
KDVIEPIKDNDAAIRNYGIELAVSLCQELLASGLVPLHFYTLNREMATTEVLKRLGMWTEPPRRPLPWA
LSAHPKRREEDVRPIFWASRPKSYIYRTQEWDEFNPNRWNSSSPAFGELKDYYLFFYKSKSPEKELLKM
WGEELTSEASVFEVFLYLSGEPNRRNGHKVTCLPWNDEPLAAETSLLKEELLRVNRQGILTINSQPNING
KPSSDPIVWGWSGGYVFQKAYLEFFTSRETAELQLVKKYELRVNYHLVNVKGENITNAPELQPNAVT
WGIFPGREIIQPTVVDVPSFMFWKDEAFALWIEQWGLYEEESPRTIIQYIHDNYFLVNLVDNDFPLDN
CLWQVVEDTLELLNRPTQNARETEAP
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TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_005957

ORF Size: 1968 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_005957.2](#), [NP_005948.2](#)

RefSeq Size: 6099 bp

RefSeq ORF: 1971 bp

Locus ID: 4524

UniProt ID: [P42898](#)

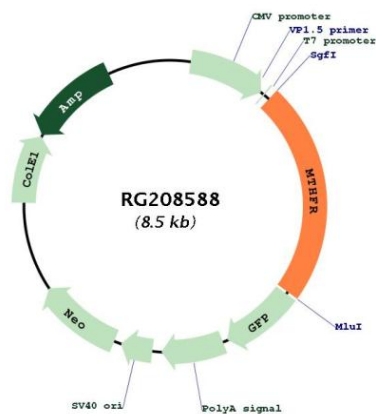
Cytogenetics: 1p36.22

Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, Methane metabolism, One carbon pool by folate

Gene Summary: The protein encoded by this gene catalyzes the conversion of 5,10-methylenetetrahydrofolate to 5-methyltetrahydrofolate, a co-substrate for homocysteine remethylation to methionine. Genetic variation in this gene influences susceptibility to occlusive vascular disease, neural tube defects, colon cancer and acute leukemia, and mutations in this gene are associated with methylenetetrahydrofolate reductase deficiency.[provided by RefSeq, Oct 2009]

Product images:



Circular map for RG208588