

## Product datasheet for **RC208588**

### **MTHFR (NM\_005957) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MTHFR (NM_005957) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MTHFR
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



[View online »](#)

ORF Nucleotide  
Sequence:

>RC208588 representing NM\_005957  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
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ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
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**Protein Sequence:** >RC208588 representing NM\_005957  
 Red=Cloning site Green=Tags(s)

```
MVNEARGNSSLNPCLEGSASSGSESSKSSRCSTPGLDPERHERLREKMRRRLESGDKWFSLEFFPRTA
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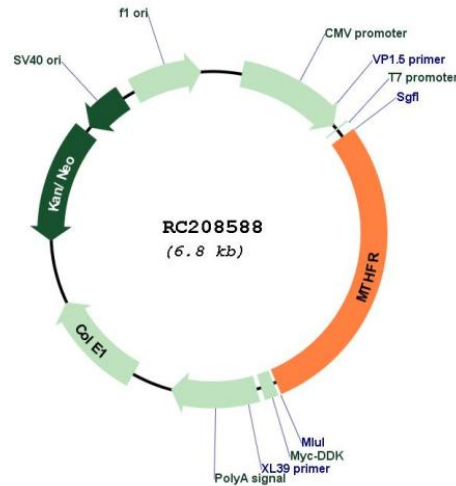
**Chromatograms:** [https://cdn.origene.com/chromatograms/mg3174\\_e05.zip](https://cdn.origene.com/chromatograms/mg3174_e05.zip)

**Restriction Sites:** Sgfl-MluI

**Cloning Scheme:**



## Plasmid Map:



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.

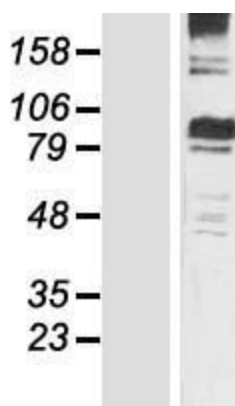
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

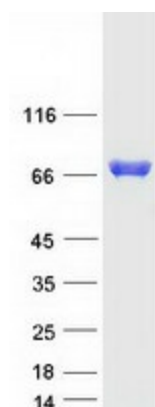
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store 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](#)

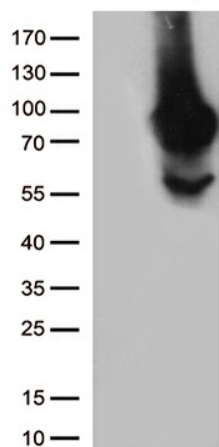
RefSeq Size:	6099 bp
RefSeq ORF:	1971 bp
Locus ID:	4524
UniProt ID:	<a href="#">P42898</a>
Cytogenetics:	1p36.22
Protein Families:	Druggable Genome
Protein Pathways:	Metabolic pathways, Methane metabolism, One carbon pool by folate
MW:	74.4 kDa
Gene Summary:	The protein encoded by this gene catalyzes 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:**


Western blot validation of overexpression lysate (Cat# [LY416960]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208588 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MTHFR protein (Cat# [TP308588]). The protein was produced from HEK293T cells transfected with MTHFR cDNA clone (Cat# RC208588) using MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MTHFR (Cat# RC208588, 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-MTHFR (Cat# [TA812635])(1:500). Positive lysates [LY416960] (100ug) and [LC416960] (20ug) can be purchased separately from OriGene.