

Product datasheet for **RG200089**

DHFR (NM_000791) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: DHFR (NM_000791) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: DHFR
Synonyms: DHFRP1; DYR
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG200089 representing NM_000791
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGTTGGTTTCGCTAAACTGCATCGTCGCTGTGTCCAGAACATGGGCATCGGCAAGAACGGGGACCTGC
 CCTGGCCACCGCTCAGGAATGAATTCAGATATTTCCAGAGAATGACCACAACCTCTTCAGTAGAAGGTAA
 ACAGAATCTGGTGATTATGGGTAAGAAGACCTGGTCTCCATTCCTGAGAAGAATCGACCTTTAAAGGGT
 AGAATTAATTTAGTTCTCAGCAGAGAATCAAGGAACCTCCACAAGGAGCTCATTTCTTTCCAGAAGTC
 TAGATGATGCCTAAAACCTTACTGAACAACCAGAATTAGCAAATAAAGTAGACATGGTCTGGATAGTTGG
 TGGCAGTTCTGTTTATAAGGAAGCCATGAATCACCCAGGCCATCTAAACTATTTGTGACAAGGATCATG
 CAAGACTTTGAAAGTGACACGTTTTTTCCAGAAATGATTTGGAGAAATATAAACTCTGCCAGAATACC
 CAGGTGTTCTCTGATGTCCAGGAGGAGAAAGGCATTAAGTACAAATTTGAAGTATATGAGAAGAATGA
 T

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG200089 representing NM_000791
 Red=Cloning site Green=Tags(s)

MVGLNLCIVAVSQNMGIGKNGDLPWPPLRNEFRYFQRMTTTTSSVEGKQNLVIMGKKTWFSIPEKNRPLKG
 RINLVL SRELKEPPQGAHFLSRSLDDALKLTEQPELANKVDMVWIVGGSSVYKEAMNHPGHLKLFVTRIM
 QDFESDTFFPEIDLEKYKLLPEYPGVLSDVQEEKGIKYKFEVYEKND

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

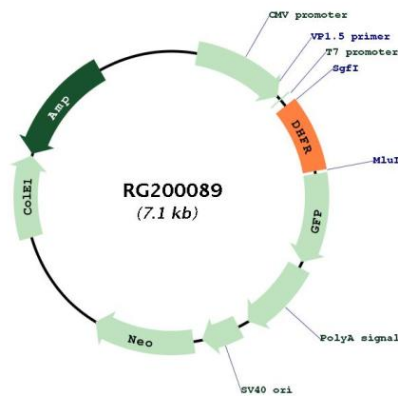


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Cloning Scheme:


- ACCN:** NM_000791
- ORF Size:** 561 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_000791.4](#)
- RefSeq Size:** 3932 bp
- RefSeq ORF:** 564 bp
- Locus ID:** 1719
- UniProt ID:** [P00374](#)
- Cytogenetics:** 5q14.1

Domains:	DiHfolate_red
Protein Families:	Druggable Genome, Stem cell - Pluripotency
Protein Pathways:	Folate biosynthesis, Metabolic pathways, One carbon pool by folate
Gene Summary:	Dihydrofolate reductase converts dihydrofolate into tetrahydrofolate, a methyl group shuttle required for the de novo synthesis of purines, thymidylic acid, and certain amino acids. While the functional dihydrofolate reductase gene has been mapped to chromosome 5, multiple intronless processed pseudogenes or dihydrofolate reductase-like genes have been identified on separate chromosomes. Dihydrofolate reductase deficiency has been linked to megaloblastic anemia. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2014]

Product images:


Circular map for RG200089