

## Product datasheet for **RG218940**

### **MTGR1 (CBFA2T2) (NM\_001032999) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MTGR1 (CBFA2T2) (NM_001032999) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MTGR1
Synonyms:	EHT; MTGR1; p85; ZMYND3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG218940 representing NM\_001032999  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGTAGGCGTCCCTGGAGCGGCCCTTCCAGCTTGGTCTGAGAAAAGGGTGCCAGCGATGCCTGGAT  
 CGCCTGTGGAAGTGAAGATACAGTCCAGATCCTCACCTCCACCATGCCACCCCTCCACCAATAAATCC  
 TGGAGGACCGAGGCCAGTGTCTTCACTCTACTGCATTAAGCAATGGCATCAACCATTCTCTCTACC  
 CTGAATGGTGCCCATCACCGCCACAGAGATTCAGCAATGGTCTGCCTCTCCACATCATCTGCACTCA  
 CAAATCAGCAATTGCCAGCCACTTGTGGTCTCGACAACCTCAGCAAGTTGAAACGCTTTCTTACCCTCT  
 GCAACAGTTTGGCAATGACATCTCCCCTGAGATTGGGGAGAAGGTGCGGACTCTTGTCTTGCAGTGGT  
 AACTCAACAGTGACAATTGAGGAATCCACTGTAAGCTCCAAGAAGCCACAACTTTCCCCTTCGTCCTT  
 TTGTGATTCATTTCTCAAGGCCAACCTGCCCTGCTGCAGCGGAACTGCTGCACTGCGCTCGGGCGGC  
 CAAGCAGACCCCATCCCAGTACCTGGCTCAGCAGCAACACCTTCTGCTCAACACAAGCATTGCATCGCT  
 GCTGACTCGTCAGAGTTGCTCATGGAGGTGCACGAAATGGGAAGAGGCCAGTCCAGAGAGGAGAGAAG  
 AGAATAGTTTTGATAGAGACACAATTGCTCTGAGCCTCTGCCAAGAGAGTATGTACCATCAGCCCTGC  
 TCCTCGGCACAGTCTGCTCTCACTGTGCCCTCATGAATCCCGGGGCCAATCCATCCTACCCCTCCA  
 CCTCTTACGATTACACCTTAGAGGATATTGCACTTCTCACCTGTATCGGGAACCAACAAGATGCTAG  
 AGCATCGAGAAGTTCGTGATAGACACCACAGTCTTGGTCTAAATGGAGGCTATCAAGATGAGTTGGTAGA  
 TCATCGTTTGACGAAAAGGGAATGGGCTGATGAATGGAACATCTTGACCATGCGCTGAATTGCATTATG  
 GAAATGGTAGAGAAAACAAGCGCTCTATGGCAGTTCTGCGGCGCTGTCAGGAATCAGATCGTGAAGAAC  
 TCAACTACTGAAAAGACGGTACAATGAAAACACAGAGCTGAGGAAAACGGGGACCGAGTTGGTCTCCAG  
 GCAGCACAGCCCTGGGAGTGCAGATTCTCTCAGCAATGATTCTCAGAGAGAGTTCAACAGCAGGCCAGGT  
 ACAGGATACGTACCTGTGGAGTTTTGGAAAAAACAGAAGAAGCTGTGAATAAGGTGAAAATTCAGGCCA  
 TGTGAGAAGTACAGAAGGCCGCTCGCTGAGGCAGAGCAGAAAGCCTTTGAAGTGATTGCAACAGAGAGAGC  
 ACGAATGGAGCAAACCATAGCGGATGTCAAGCGGCAGGCCGAGAGGATGCTTTCCTCGTCATCAATGAG  
 CAAGAGGAGTCCACGGAGAACTGCTGGAAGTGTGGCCGAAAGCCAGCGAGACATGCAGTGGCTGCAATA  
 TCGCGGATACTGTGGCTCTTCTGCCAGCACAAGGACTGGGAGCGGCACCACCGCTCTGTGGTCAGAA  
 CCTGCATGGCCAGAGCCCCACGGCCAGGGCCGGCCGCTGCTTCTGTAGGCAGGGGCTCCTCTGCCAGG  
 TCCGCCGACTGCAGCGTCCCAGCCAGCCCTCGACAAGACCTCGGCAACCACATCGCGTTCCTCAACAC  
 CTGCTTCTGTGACAGCTATCGACACCAACGGACTC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG218940 representing NM\_001032999  
 Red=Cloning site Green=Tags(s)

MVGVPGAAAFQLGPEKRVAMPGSPVEVKIQSRSSPPTMPPLPPINPGGPRPVSFTPTALSNGINHSPPT  
 LNGAPSPQRFNSNGPASSTSSALTNQQLPATCGARQLSKLKRFLTTLQQFGNDISPEIGEKVRTLVLALV  
 NSTVTIEEFHCKLQEATNFPLRPFVIPFLKANLPLLQRELLHCARAAKQTPSQYLAQHEHLLNLSIASP  
 ADSSELLMEVHGNGKRSPERREENSFDRDTIAPEPPAKRVCTISPAPRHSPALTVPLMNPGGQFHPTPP  
 PLQHYTLIEDIATSHLYREPKNMLEHREVRDRHSLGLNGGYQDELVDHRLTEREWADEWKHLDHALNCIM  
 EMVEKTRRSMVLRRCQESDREELNYWKRRYNENTELRKTGTTELVSQRHSPGSADSLSNDSQREFNSRPG  
 TGYVPVEFWKKTEEAVNKVKIQAMSEVQKAVAEAEQKAFEVIATERARMEQTIADVQRQAEDAFVLVINE  
 QEESTENCWNCGRKASETCSGCNIARYCGSFQHKDWERHHRLCGQLHGGQSPHGQGRPLLPVGRGSSAR  
 SADCSVPSPALDKTSATTSRSSTPASVTAIDTNGL

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001032999

**ORF Size:** 1785 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\\_001032999.3](#)

**RefSeq Size:** 6517 bp

**RefSeq ORF:** 1788 bp

**Locus ID:** 9139

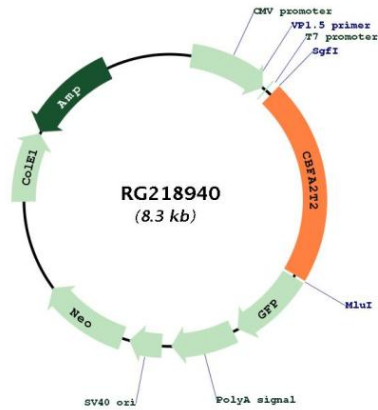
**UniProt ID:** [O43439](#)

**Cytogenetics:** 20q11.21-q11.22

**Protein Families:** Transcription Factors

**Gene Summary:** In acute myeloid leukemia, especially in the M2 subtype, the t(8;21)(q22;q22) translocation is one of the most frequent karyotypic abnormalities. The translocation produces a chimeric gene made up of the 5'-region of the RUNX1 (AML1) gene fused to the 3'-region of the CBFA2T1 (MTG8) gene. The chimeric protein is thought to associate with the nuclear corepressor/histone deacetylase complex to block hematopoietic differentiation. The protein encoded by this gene binds to the AML1-MTG8 complex and may be important in promoting leukemogenesis. Several transcript variants are thought to exist for this gene, but the full-length nature of only three have been described. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RG218940