

## Product datasheet for **RC202013**

### **MTGR1 (CBFA2T2) (NM\_001039709) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MTGR1 (CBFA2T2) (NM_001039709) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MTGR1
Synonyms:	EHT; MTGR1; p85; ZMYND3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC202013 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGGGTTTCACCATGTTGGCCAGGCTCGTCTTGAACCTCTGACCTCAGGTGATCTGCCTGCATTGGCCT  
 CCCAACGTGCTGGGATTACAGTTGGTCCTGAGAAAAGGGTGCCAGCGATGCCTGGATCGCCTGTGGAAGT  
 GAAGATACAGTCCAGATCCTCACCTCCCACCATGCCACCCTCCCACCAATAAATCCTGGAGGACCGAGG  
 CCAGTGTCTTCACTCTACTGCATTAAGCAATGGCATCAACCATTCTCCTCCTACCCTGAATGGTGCC  
 CATCACCGCCACAGAGATTCAGCAATGGTCTGCCTCCTCCACATCATCTGCACTCACAAATCAGCAATT  
 GCCAGCCACTTGTGGTCTGACAACCTCAGCAAGTTGAAACGCTTTCTTACCCTCTGCAACAGTTTGGC  
 AATGACATCTCCCTGAGATTGGGGAGAAGGTGCGGACTCTTGTCTTGCCTGGTGAACCAACAGTGA  
 CAATTGAGGAATCCACTGTAAGCTCCAAGAAGCCACAACTTTCCCTTCGTCCTTTGTGATTCCATT  
 TCTCAAGGCCAACCTGCCCTGTGCAGCGGGAAGTCTGCACTGCGCTCGGGCGCCAAGCAGACCCCA  
 TCCAGTACCTGGCTCAGCACGAACACCTTCTGCTCAACACAAGCATTGCATCGCCTGCTGACTCGTCAG  
 AGTTGCTCATGGAGTGCACGGAATGGGAAGAGGCCAGTCCAGAGAGGAGAGAAGAGAATAGTTTGA  
 TAGAGACACAATTGCTCCTGAGCCTCCTGCCAAGAGAGTATGTACCATCAGCCCTGCTCCTCGGCACAGT  
 CCTGCTCTCACTGTGCCCTCATGAATCCTGGGGCCAATTCCATCCTACCCCTCCACCTCTTCAAGCATT  
 ACACCTTAGAGGATATTGCAACTTCTCACCTGTATCGGAACCCAACAAGATGCTAGAGCATCGAGAAGT  
 TCGTGATAGACACCACAGTCTTGGTCTAAATGGAGGCTATCAAGATGAGTTGGTAGATCATCGTTTGACA  
 GAAAGGGAATGGGCTGATGAATGAAACATCTTGACCATGCGCTGAATTGCATTATGAAATGGTAGAGA  
 AAACAAGGCGCTCTATGGCAGTTCTGCGGCGCTGTCAGGAATCAGATCGTGAAGAATCAACTATGGAA  
 AAGACGGTACAATGAAAACACAGAGCTGAGGAAAACGGGGACCGAGTTGGTCTCCAGGCACGACGCCCT  
 GGGAGTGCAGATTCTCTCAGCAATGATTCTCAGAGAGAGTTCAACAGCAGGCCAGGTACAGGATACGTAC  
 CTGTGGAGTTTGGAAAAAACAGAAGAAGCTGTGAATAAGGTGAAAATTCAGGCCATGTCAGAAGTACA  
 GAAGGCCGTCGCTGAGGCAGAGCAGAAAGCCTTTGAAGTATTGCAACAGAGAGAGCAGCAATGGAGCAA  
 ACCATAGCGGATGTCAAGCGGCAGGCCGAGAGGATGCTTTCCTCGTCATCAATGAGCAAGAGGAGTCCA  
 CGGAGAACTGCTGGAAGTGTGGCCGAAAGCCAGCGAGACATGCAGTGGTGAATATCGCGGATACTG  
 TGGCTCTTCTGCCAGCACAGGACTGGGAGCGCACACCAGCCTCTGTGGTCAAGCCTGCATGGCCAG  
 AGCCCCACGGCCAGGGCCGGCCGCTGCTTCTGTAGGCAGGGGCTCCTCTGCCAGTCCGCGGACTGCA  
 GCGTGCCAGCCAGCCCTCGACAAGACCTCGGAACCCACATCGGTTCTCAACACCTGCTTCTGTGAC  
 AGCTATCGACACCAACGGACT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC202013 protein sequence  
 Red=Cloning site Green=Tags(s)

MGFHHVQGARLELLTSGDLPALASQRAGITVGPEKRVPPAMPSPVEVKIQSRSSPTMPPLPPINPGGPR  
 PVSFTPTALSNGINHSPPTLNGAPSPQRF SNGPASSTSSALTNQQLPATCGARQLSKLKRFLTTLQQFG  
 NDISPEIGEKVRTLVLALVNSTVTIEEFHCKLQEATNFPLRPFVIFLKANLPLLQRELLHCARAAKQTP  
 SQYLAQHEHLLNLSIASPADSSELLMEVHNGKRSPERREENSFDRDTIAPEPPAKRVCTISPAPRHS  
 PALTVPLMNPGGQFHPTPPPLQHYTLEDIATSHLYREPKNMLEHREVRDRHSLGLNGGYQDELVDHRLT  
 EREWADEWKHLDHALNCIMEMVEKTRRSMAVLRRCQESDREELNYWKRRYNENTELRKTGTTELVSQHS  
 GSADSLSNSQREFNSRPGTGYVPVEFWKTEEAVNKVKIQAMSEVQKAVAEAEQKAFEVIATERARMEQ  
 TIADVQRQAEDAFVINEQEESTENCWNCGRKASETCSGCNIARYCGSFCQHKDWERHRLCGQNLHGQ  
 SPHGQGRPLLPGVGRGSSARSADCSVPSALDKTSATTSRSSTPASVTAIDTNGL

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6523\\_e04.zip](https://cdn.origene.com/chromatograms/mk6523_e04.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001039709

**ORF Size:** 1845 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 Size:** 7449 bp

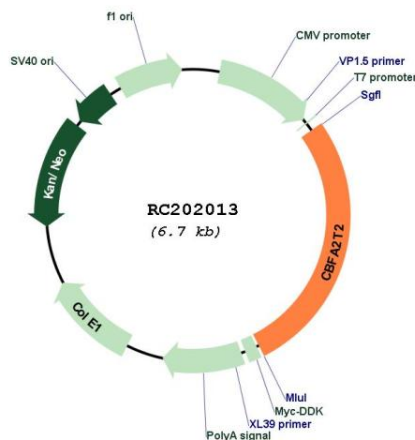
**RefSeq ORF:** 1728 bp

**Locus ID:** 9139

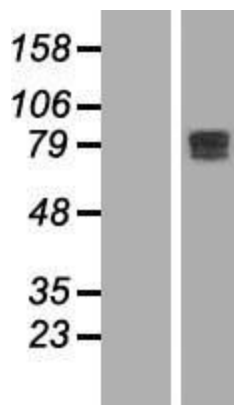
**UniProt ID:** [O43439](#)  
**Cytogenetics:** 20q11.21-q11.22  
**Protein Families:** Transcription Factors  
**MW:** 68 kDa

**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]

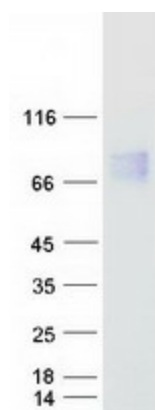
### Product images:



Circular map for RC202013



Western blot validation of overexpression lysate (Cat# [LY421813]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202013 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CBFA2T2 protein (Cat# [TP302013]). The protein was produced from HEK293T cells transfected with CBFA2T2 cDNA clone (Cat# RC202013) using MegaTran 2.0 (Cat# [TT210002]).