

## Product datasheet for **RG218564**

### **RUNX1T1 (NM\_004349) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RUNX1T1 (NM_004349) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RUNX1T1
Synonyms:	AML1-MTG8; AML1T1; CBFA2T1; CDR; ETO; MTG8; ZMYND2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RG218564 representing NM\_004349  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCCTGATCGTACTGAGAAGCACTCCACAATGCCAGACTCACCTGTGGATGTGAAGACGCAATCTAGGC  
 TGA CTCTCCAACAATGCCACCTCCCCAACTACTCAAGGAGCTCCAAGAACCAGTTCATTTACACCGAC  
 AACGTTAACTAATGGCACGAGCCATTCTCTACAGCCTTGAATGGCGCCCCCTCACCAATGGCTTC  
 AGCAATGGGCTTCTCTTCTCTCTCTCTCTGGCTAATCAACAGCTGCCCCAGCCTGTGGTGCCA  
 GGCAACTCAGCAAGCTGAAAAGTTCTTACTACCCTGCAGCAGTTTGGCAATGACATTTACCCGAGAT  
 AGGAGAAAAGATTGACCCCTCGTTCTGGGACTAGTGAATCCACTTTGACAATTGAAGAATTTCAATCC  
 AAAGTGAAGAAGCTACTAACTCCCACTGAGACCTTTTGTATCCCATTTTGAAGGCCAATGCCCC  
 TGCTGCAGCGTGAGCTCCTCCACTGCGCAAGACTGGCCAAACAGAACCCGCCCAGTACCTCGCCAGCA  
 TGAACAGCTGCTTCTGGATGCCAGCACCTCACCTGTTGACTCCTCAGAGCTGCTTCTCGATGTGAAC  
 GAAAACGGGAAGAGGCGAACTCCAGACAGAACCAAGAAAATGGCTTTGACAGAGAGCCTTTGCACTCAG  
 AACATCCAAGCAAGCGACCATGCACTATTAGCCAGGCCAGCGGTACAGTCCAAATAACGGCTTATCCTA  
 CCAGCCCAATGGCCTGCCTCACCTACCCACCTCCACCTCAGCATTACCGTTTGGATGATATGGCCATT  
 GCCCACCCTACAGGGACTCCTATCGACACCCAGCCACAGGGACCTCAGGGACAGAAACAGACCTATGG  
 GGTTGCATGGCACACGTCAAGAAGAAATGATTGATCACAGACTAACAGACAGAGAATGGGAGAAGAGTG  
 GAAACATCTTGACCATCTGTTAACTGCATAATGGACATGGTAGAAAAACAAGGCGATCTCTACCAGTA  
 CTAAGGCGGTGTCAAGAAGCAGACCGGGAAGAAATGAATTACTGGATCCGGCGGTACAGTGACGCCGAGG  
 ACTTAAAAAAGGTGGCGCAGTAGCAGCAGCCACTCTAGGCAGCAGAGTCCCCTCAACCCAGACCCAGT  
 TGCCTAGACCGCATCGGGAATTCCTTACAGGCCTGCGTCTGGATACGTGCCAGAGGAGATCTGGAAG  
 AAAGCTGAGGAGGCCGTAATGAGGTGAAGCGCCAGGCGATGACGAGCTGCAGAAGGCCGTGCTGAGG  
 CGGAGCGGAAAGCCACGACATGATCACACAGAGAGGGCCAAGATGGAGCGCACGGTCGCCGAGGCCAA  
 ACGGCAGGCGGCGGAGGACGCACTGGCAGTTATCAATCAGCAGGAGGATTCAAGCAGAGTTGCTGGAAT  
 TGTGGCCGTAAGCGAGTGAACTGCAGTGGCTGTAAACAGCCCGATACTGTGGCTCATTTTGCACGC  
 ACAAGACTGGGAGAAGCACCATCACATCTGTGGACAGACCTGCAGGCCAGCAGCAGGGAGACACACC  
 TGCAGTCAGCTCCTCTGTACGCCAACAGCGGGGCTGGGAGCCCGATGGACACACCACCAGCAGCCACT  
 CCGAGGTCAACCCCGGGAACCCCTCCACCATAGAGACAACCCCTCGC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG218564 representing NM\_004349  
 Red=Cloning site Green=Tags(s)

MPDRTEKHSTMPDSPVDVKTQSRLTPPTMPPPTTQGAPRTSSFPTTTLNNGTSHSPALNGAPSPPNGF  
 SNGPSSSSSSSLANQQLPPACGARQLSKLKRFLTLQQFNDISPEIGERVRLVGLVNSTLTIEEFHS  
 KLQEATNFPLRPFVIFPLKANLPLLQRELLHCARLAKQNPAYLAQHEQLLLDASTTSPVDSSELLLDVN  
 ENKRRTPDRTKENGFDRPLHSEHPSKRPCTISPGQRYSPNGLSYQPNGLPHPTPPPPQHYRLDDMAI  
 AHYRDSYRHPSHRDLRDRNRMGLHGTRQEEMIDHRLTDREWAEWKHLHLLNCIMDMVEKTRRSLTV  
 LRRQEAADREELNYWIRRYSDAEDLKKGGGSSSSSRQQSPVNPDPVALDAHREFLHRPASGYVPEEIKW  
 KAEAVNEVKRQAMTELQKAVSEAERKAHDMITTERAKMERTVAEAKRQAAEDALAVINQQEDSSSESCWN  
 CGRKASETCSGCNTARYCGSFCQHKDWEKHHHICGQTLQAQQGDTPAVSSSVTPNSGAGSPMDTPPAAT  
 PRSTTPGTPSTIETTPR

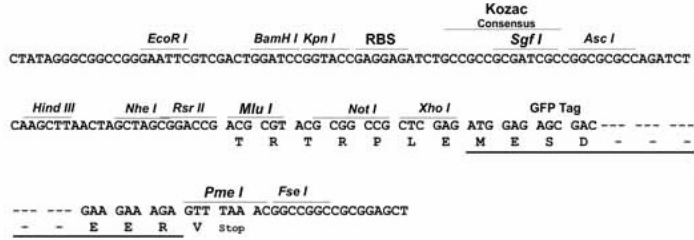
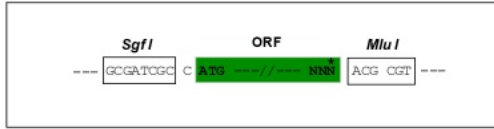
**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

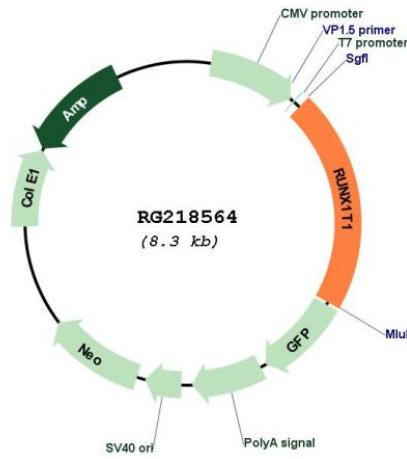
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM\_004349

ORF Size: 1731 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_004349.4](#)

**RefSeq Size:** 7420 bp

**RefSeq ORF:** 1734 bp

**Locus ID:** 862

**UniProt ID:** [Q06455](#)

**Cytogenetics:** 8q21.3

**Domains:** zf-MYND, TAFH

**Protein Families:** Transcription Factors

**Protein Pathways:** Acute myeloid leukemia, Pathways in cancer

**Gene Summary:**

This gene encodes a member of the myeloid translocation gene family which interact with DNA-bound transcription factors and recruit a range of corepressors to facilitate transcriptional repression. The t(8;21)(q22;q22) translocation is one of the most frequent karyotypic abnormalities in acute myeloid leukemia. The translocation produces a chimeric gene made up of the 5'-region of the runt-related transcription factor 1 gene fused to the 3'-region of this gene. The chimeric protein is thought to associate with the nuclear corepressor/histone deacetylase complex to block hematopoietic differentiation. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Nov 2010]