

## Product datasheet for **MR215339**

### **Rtf1 (NM\_030112) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Rtf1 (NM_030112) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Rtf1
Synonyms:	2900005O08Rik; 6530416A09Rik; AI853581; AU043144; AW553985; cbp82; Gtl7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR215339 representing NM\_030112  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCGCGGTGCCTTTGTGTGGTTCGAGCGCGCGCGGTGGCGCGCGCGGTGGCGCGCGCGCAGTGGCGG  
 TCCCACTGGCAGGCGGGCAAGAGGGGAGTCAGGGCGGCGTCCGGCGTGAAGCCGGGGGACCACCATGGT  
 AAAGAAGCGAAAAGGCCGTGTCGTGATCGACTCGGATACGGAAGACAGCGGCAGTGACGAGAACCCTGGAT  
 CAGGAGCTCTTGTCCCTGGCGAAAACGGAAGCGCAGTACTCCGAGGAGAAGGAGCCTCCTGTGAGTCAGC  
 CTGCGACCTCATCAGATTCAGAGACCTCCGACAGTATGATGAGTGGACATTTGGGAGCAATAAAAAATA  
 GAAGAAAGGAAAAACCAGAAAAGTAGAGAAGAAAGGAGCCATGAAGAAGCAAGCCAAACAAAGCTGCCTCC  
 TCGGGCAGCTCAGACAGAGACAGCTCAGCTGAGAGCTCTGCCCTGAGGAAGGTGAAGTGCAGATTCTG  
 AGAGCAGCAGCTCCTCTCCAGTTCAGATTCAGACTCCTCGTCAGAAGATGAAGAATTCATGATGGCTA  
 TGGAGAGGATCTTATGGGAGATGAGGAAGATAGGGCCCGACTGGAGCAGATGACGGAGAAGGAGAGGGAG  
 CAGGAGCTCTTCAACCGCATAGAGAAGAGAGAGGTGTTGAAAAGAAGATTTGAAATTAAGAAAAACTAA  
 AACAGCCAAAAAGAGAAGAAAGAAAAAGAAAAAGCAAGAAAGAAACAAAGAAAGAAAGCT  
 GACACAGATTCAGGAATCTCAGGTTACTTCCCACAATAAAGAACGGCGTCCAAGCGGGATGAAAACTA  
 GATAAGAAATCTCAAGCCATGGAGGAGCTAAAAGCAGAGCGAGAAAAACGGAAGAACAGAACAGCTGAGC  
 TCCTCGCCAAAAACAGCCATTGAAAACAGTGAAGTCTACTCTGACGATGAGGAGGAGGAAGATGATGA  
 CAAGTCCAGTGAGAAATCGGACCGCTCATCCCGGACATCATCTGATGAAGAGGAAGAGAAAGAAAGAA  
 ATCCCTCCAAAATCACAGCCAGTCTCATTACCCGAGGAAGTGAATCGGGTTCGGTTATCACGGCATAAGC  
 TAGAGCGCTGGTGTACATGCCCTCTTTGCTAAAAGTGCACAGGATGTTTTGTACGGATTGGCATTGG  
 AAACCACAATAGCAAGCCAGTTTACCGGGTGGCTGAGATCACGGGTGTTGTGAAAAGTCCCAAAGTTTAC  
 CAGCTGGGTGGCACCAGAACAAATAAAGGGCTCCAGCTACGGCATGGCAATGACCAGCGAGTGTCCGCC  
 TAGAGTTTGTGTCCAACCAAGAATTCAGTAAAAGTGAATTCATGAAGTGGAAAGAAGCGATGTTTTCTGC  
 TGGCATGCAGTTGCCCACTAGATGAAATCAATAAAAAGGAATTATCTATTAAGGAAGCTCAATTAT  
 AAATTCATGATCAGGACATTGAGGAGATTGTAAGAGAAAGGAAAGGTTTCAGAAAAGCCCCACCAAAT  
 ATGCTATGAAGAAGACTCAGCTGCTAAAGGAGAAGGCTATGGCTGAGGACCTGGGAGATCAGGACAAAGC  
 CAAACAAATCAAAGACCAGCTAAATGAGCTAGAGGAGCGAGCAGAGGCCCTGGACCGCCAGCGGACCAAG  
 AACATATCTGCTATCAGTACATCAACCAGCGGAATCGGGAGTGAATATTGTGGAGTCTGAGAAGGCTC  
 TGGTGGCTGAAAAGTCACAACATGAGAAACCAACAGATGGACCCCTTACCAGCGGCAGTCAAACCCAC  
 CATCGTCTCAATTCAGGGATCCAGCTGTTCCAGGCTGCCATTTTGGCCAGCTCAATGCAAAAACCGGT  
 TCTGGGGTATTACCAGATGCTCCAAAGGAAATGAGCAAGGGTCAAGGAAAGGATAAAGATTTGAATTCTA  
 AGACAGCCAGTGACCTCTCGGAAGACCTGTTCAAAGTGCATGACTTTGACGTGAAGATTGACTTACAGGT  
 TCCAAGCTCAGAGTCAAAGCTTTGGCCATTACCTCAAAGCCCCACCAGCCAAGGACGGAGCTCCGAGG  
 AGATCTCTGAACCTAGAAGACTACAAAAACGACGGGGCTTATT

**ACGCGT**ACGCGGCGGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR215339 representing NM\_030112  
Red=Cloning site Green=Tags(s)

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MRGRLCVGRAAAVAAVAAAAVAVPLAGGQEGSQGGVRRGSRGTTMVKKRKRGRVVIDSDTEDSGSDENLD
QELLSLAKRKRSDSEEKPPVSPQAASSDSETSDSDDEWTFGSNKNKKKGKTRKVEKKGAMKKQANKAAS
SGSSDRDSSAESSAPEEGEVSDSESSSSSSSDSDSSSEDEEFHDGYGEDLMGDEEDRARLEQMTEKERE
QELFNRIEKREVLKRRFEIKKKLKTAKKKEKKEKKEKKEKKEKKEKKEKKEKKEKKEKKEKKEKKEKKEK
DKKSQAMEELKAEREKRNRTAELLAKKQPLKTSEVYSDDEEEEDDKSSEKSDRSRTSSSDEEEKEE
IPPKSQPVSLPEELNRVRLSRHKLERWCHMPFFAKTVTGCFVRIGIGNHNSKPVYRVAEITGVVETAKVY
QLGGTRTNKGLQLRHGNDQRVFRLEFVSNQEFTESEFMKWKEAMFSAGMQLPTLDEINKKELSIKEALNY
KFNDQDIEEIVKEKERFRKAPPNYAMKKTQLLKEKAMAEDLDGQDKAKQIQDQLNELEERAEALDRQRTK
NISAISYINQRNREWNIVESEKALVAESHMNRNQMPDPTRRQCKPTIVSNRDPVQAAILAQLNAKYG
SGVLPDAPKEMSKGQKDKDLNSKTASDLSEDLFKVHDFDVKIDLQVPSSSEKALAITSKAPPAKDGAPR
RSLNLEDYKRRGLI
```

TRTRPLEQKLISEEDLANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9049\\_c07.zip](https://cdn.origene.com/chromatograms/mm9049_c07.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_030112

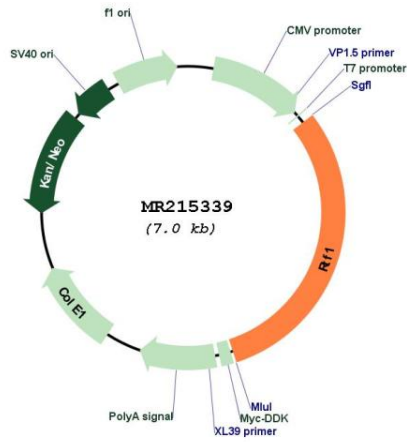
**ORF Size:** 2145 bp

**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.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_030112.2</a> , <a href="#">NP_084388.2</a>
<b>RefSeq Size:</b>	4680 bp
<b>RefSeq ORF:</b>	2148 bp
<b>Locus ID:</b>	76246
<b>UniProt ID:</b>	<a href="#">A2AQ19</a>
<b>Cytogenetics:</b>	2 E5
<b>MW:</b>	81.2 kDa
<b>Gene Summary:</b>	<p>Component of the PAF1 complex (PAF1C) which has multiple functions during transcription by RNA polymerase II and is implicated in regulation of development and maintenance of embryonic stem cell pluripotency. PAF1C associates with RNA polymerase II through interaction with POLR2A CTD non-phosphorylated and 'Ser-2'- and 'Ser-5'-phosphorylated forms and is involved in transcriptional elongation, acting both independently and synergistically with TCEA1 and in cooperation with the DSIF complex and HTATSF1. PAF1C is required for transcription of Hox and Wnt target genes. PAF1C is involved in hematopoiesis and stimulates transcriptional activity of KMT2A/MLL1. PAF1C is involved in histone modifications such as ubiquitination of histone H2B and methylation on histone H3 'Lys-4' (H3K4me3). PAF1C recruits the RNF20/40 E3 ubiquitin-protein ligase complex and the E2 enzyme UBE2A or UBE2B to chromatin which mediate monoubiquitination of 'Lys-120' of histone H2B (H2BK120ub1); UB2A/B-mediated H2B ubiquitination is proposed to be coupled to transcription. PAF1C is involved in mRNA 3' end formation probably through association with cleavage and poly(A) factors. Binds single-stranded DNA (By similarity). Required for maximal induction of heat-shock genes. Required for the trimethylation of histone H3 'Lys-4' (H3K4me3) on genes involved in stem cell pluripotency; this function is synergistic with CXXC1 indicative for an involvement of a SET1 complex.[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR215339