

## Product datasheet for **RR207712**

### Rnf2 (NM\_001025667) Rat Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Rnf2 (NM_001025667) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Rnf2
Synonyms:	MGC114502
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RR207712 representing NM_001025667 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGTCTCAGGCTGTGCAGACAAATGGAACCAACCATTAAAGCAAGACATGGGAGCTCAGTTTGTACGAAT  
TACAACGGACACCTCAGGAGGCAATAACAGATGGCTTGGAAATCGTGGTTTCACCTAGAAGTCTTCACAG  
TGAGTTGATGTGCCAATTTGTTGGATATGTTGAAGAACCACATGACCACAAAGGAGTGCTTACATCGC  
TTTTGTGCGGATTGCATTATCACGGCCCTCAGAAGTGGCAACAAAGAATGCCCTACCTGTGCGAAAAAAC  
TGGTTTCTAAAAGATCACTAAGGCCAGATCCAAATTTTGTATGCACTCATCAGCAAGATTTATCCGAGCCG  
TGATGAGTATGAAGCTCATCAAGAGAGAGTATTAGCTAGGATCAACAAGCACAACAATCAGCAGGCCCTC  
AGCCACAGCATTGAGGAGGGGCTGAAGATACAGGCCATGAACAGATTACAGCGAGGCAAAAAGCAGCAGA  
TTGAAAATGGCAGCGGAGCAGAAGATAATGGTGACAGTCCCATTGCAGTAATGCGTCCACACACAGCAA  
TCAGGAAGCCGGCCCCAGTAACAAACGGACCAAGACCTCAGATGACTCTGGGCTTGAACCGACAACAAC  
AATGCAGCAGTGGCAATCGATCCAGTATGGATGGTGCCAGTGAAGATTGAGTTGGTATTCAGGCCCCACC  
CAACTCTTATGGAGAAGGACGACAGCGCACAGACCAGATACATAAAGACTTCAGGCAATGCCACTGTTGA  
TCACTTATCCAAGTACCTGGCCGTGAGGTTAGCTTTAGAAGAGCTTCGAAGCAAAGGAGAGTCAAACCAG  
ATGAACCTGGATACAGCCAGTAAAAGCAGTACACCATTTACATAGCTACAGCCAGTGGCCAGTTCAGT  
TGAGTATTTGTCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RR207712 representing NM\_001025667  
 Red=Cloning site Green=Tags(s)

MSQAVQNTGTQPLSKTWELSLYELQRTPEAITDGLIIVVSPRSLHSELMCPICLDMLKNTMTTKECLHR  
 FCADCIIITALRSGNKECPTCRKKLVSKRSLRPDPNFDALISKIYPSRDEYEAHQERVLARINKHNNQAL  
 SHSIEEGLKIQAMNRLQRGKKQQIENGSGAEDNGDSSHCSNASTHSNQEAGPSNKRTKTSDDSGLELDNN  
 NAAVAIDPVMGDGASEIELVFRPHPTLMKDDSAQTRYIKTSGNATVDHL SKYLAVRLALEELRSKGESNQ  
 MNLDTASEKQYTIYIATASGQFTVSICQ

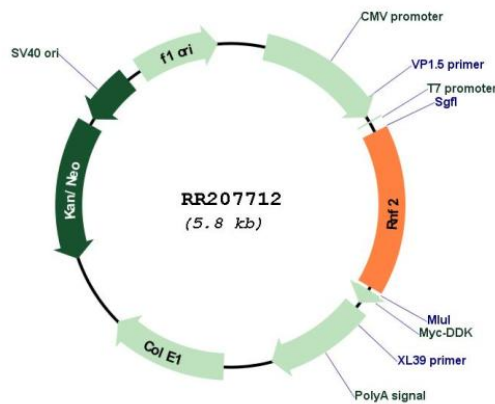
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_001025667

**ORF Size:** 924 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	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_001025667.1</a> , <a href="#">NP_001020838.1</a>
<b>RefSeq Size:</b>	2418 bp
<b>RefSeq ORF:</b>	927 bp
<b>Locus ID:</b>	304850
<b>UniProt ID:</b>	<a href="#">Q4KLY4</a>
<b>Cytogenetics:</b>	13q21
<b>MW:</b>	34.2 kDa
<b>Gene Summary:</b>	E3 ubiquitin-protein ligase that mediates monoubiquitination of 'Lys-119' of histone H2A (H2AK119Ub), thereby playing a central role in histone code and gene regulation. H2AK119Ub gives a specific tag for epigenetic transcriptional repression and participates in X chromosome inactivation of female mammals. May be involved in the initiation of both imprinted and random X inactivation. Essential component of a Polycomb group (PcG) multiprotein PRC1-like complex, a complex class required to maintain the transcriptionally repressive state of many genes, including Hox genes, throughout development. PcG PRC1 complex acts via chromatin remodeling and modification of histones, rendering chromatin heritably changed in its expressibility. E3 ubiquitin-protein ligase activity is enhanced by BMI1/PCGF4. Acts as the main E3 ubiquitin ligase on histone H2A of the PRC1 complex, while RING1 may rather act as a modulator of RNF2/RING2 activity. Plays a role in the transcriptional repression of genes that are required for pluripotency in embryonic stem cells, thereby contributing to differentiation of the ectodermal and endodermal germ layers. Association with the chromosomal DNA is cell-cycle dependent. In resting B- and T-lymphocytes, interaction with AURKB leads to block its activity, thereby maintaining transcription in resting lymphocytes.[UniProtKB/Swiss-Prot Function]