

## Product datasheet for **RG237045**

### RRP4 (EXOSC2) (NM\_001282708) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	RRP4 (EXOSC2) (NM_001282708) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RRP4
Synonyms:	hRrp4p; p7; RRP4; Rrp4p; SHRF
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG237045 representing NM_001282708. Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGCGATGGAGATGAGGCTTCCAGTGGCTCGCAAGCCTCTTAGCGAGAGACTGGGCCGCGACACTAAG
AAACATCTAGTGGTGCCGGGGGATACAATCACTACGGACACAGGATTCATGCGGGGCCATGGAACGTAT
ATGGGAGAAGAGAAGCTCATTGCATCTGTTGCTGGCTCTGTGGAGAGAGTAAACAAGTTGATCTGTGTG
AAAGCTTTGAAAACCAGATACATTGGTGAAGTAGGAGACATCGTAGTGGACGAATCACAGAGGTTCAA
CAGAAGAGGTGGAAGGTGGAGACCAACTCCAGGCTGGATTCGGTCTTGCTGCTCTCGTCCATGAACCTT
CCTGGAGGAGAGCTGAGGAGAAGATCTGCAGAAGATGAGCTTGCAATGAGAGGTTTCTTACAGGAAGGG
GACCTTATCAGTGGGGTTTTGGTCCAGGTTTTCCCTCCCTGGTAAACGGCAGAAGACCCACTTTTCAT
GATTTGCCATGTGGTGCCTCAGTGATTCTCGGTAACAACGGCTTCATCTGGATTTACCCAACACCTGAG
CACAAAGAAGAGGAAGCAGGGGGCTTATTGCAAACCTGGAGCCTGTCTCTTGTGCTGATCGAGAGGTG
ATATCCCGGCTTCGGAATGCATCATCTCGCTGGTAACTCAGAGGATGATGCTGTATGATACCAGCATC
CTGTACTGCTATGAAGCATCCCTTCCACATCAGATCAAAGACATCTTAAAGCCAGAAATAATGGAGGAG
ATTGTGATGGAACACGCCAGAGGCTTTTGAACAGGAGGGA
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```



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**Protein Sequence:** >Peptide sequence encoded by RG237045  
 Blue=ORF Red=Cloning site Green=Tag(s)

MAMEMRLPVARKPLSERLGRDTKKHLVVPGDTITTDGFMRGHGTYMGEKLIASVAGSVERVNKLCV  
 KALKTRYIGEVDIVVGRITEVQQKRWKVVETNSRLDSVLLSSMNLPGGELRRRSAAEDELAMRGFLQEG  
 DLISGVLVQVSPSLVKRQKTHFDLPCGASVILGNNGFIWIYPTPEHKEEEAGGFIANLEPVSADREV  
 ISRLRNCIISLVTQRMMLYDTSILYCYEASLPHQIKDILKPEIMEEIVMETRQRLLLEQEG  
 TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMKSTKGALTFSPYLLSHV  
 MGYGFYHFGTYPSTYENPFLHAINNGGYTNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED  
 SVIFTDKIIRSNAIVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMHFKSAIHPSILQNGGPMFA  
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001282708

**ORF Size:** 801 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).

**RefSeq:** [NM\\_001282708.1](#), [NP\\_001269637.1](#)

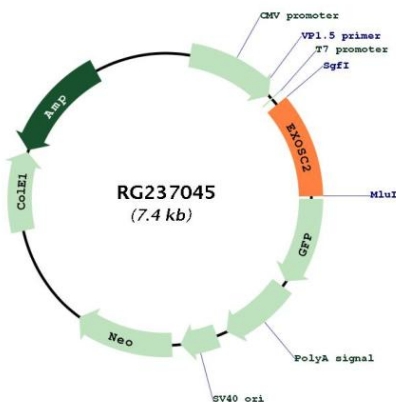
**RefSeq Size:** 1956 bp

**RefSeq ORF:** 804 bp

**Locus ID:** 23404  
**UniProt ID:** [Q13868](#)  
**Cytogenetics:** 9q34.12  
**Protein Pathways:** RNA degradation  
**MW:** 30.5 kDa

**Gene Summary:** Non-catalytic component of the RNA exosome complex which has 3'->5' exoribonuclease activity and participates in a multitude of cellular RNA processing and degradation events. In the nucleus, the RNA exosome complex is involved in proper maturation of stable RNA species such as rRNA, snRNA and snoRNA, in the elimination of RNA processing by-products and non-coding 'pervasive' transcripts, such as antisense RNA species and promoter-upstream transcripts (PROMPTs), and of mRNAs with processing defects, thereby limiting or excluding their export to the cytoplasm. The RNA exosome may be involved in Ig class switch recombination (CSR) and/or Ig variable region somatic hypermutation (SHM) by targeting AICDA deamination activity to transcribed dsDNA substrates. In the cytoplasm, the RNA exosome complex is involved in general mRNA turnover and specifically degrades inherently unstable mRNAs containing AU-rich elements (AREs) within their 3' untranslated regions, and in RNA surveillance pathways, preventing translation of aberrant mRNAs. It seems to be involved in degradation of histone mRNA. The catalytic inactive RNA exosome core complex of 9 subunits (Exo-9) is proposed to play a pivotal role in the binding and presentation of RNA for ribonucleolysis, and to serve as a scaffold for the association with catalytic subunits and accessory proteins or complexes. EXOSC2 as peripheral part of the Exo-9 complex stabilizes the hexameric ring of RNase PH-domain subunits through contacts with EXOSC4 and EXOSC7. [UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for RG237045