

## Product datasheet for **MC223904**

### Rc3h2 (NM\_001100591) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Rc3h2 (NM_001100591) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Rc3h2
Synonyms:	2900024N03Rik; 9430019J22Rik; D930043C02Rik; Mnab; Rnf164
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC223904 representing NM_001100591 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTGTGCAGGCAGCTCAATGGACAGAGTTTCTGTCCTGTCCAATCTGCTATAATGAATTTGATGAGA  
ATGTGCACAAACCCATCAGTTTAGGTTGTTACACACAGTTTGCAAGACCTGCTGAATAAACTTACC  
AAAAGCGTGTCTTTGACCAGACTGCCATAAACACAGACATTGATGTGCTCCCTGTCAACTTTGCACTT  
CTTCAGTTAGTTGAGGCCAGGTACCAGATCATCAGTCAATAAAGTTAAGTAATCTAGGTGAGAATAAAC  
ACTATGAAGTGGCAAAAAATGCGTAGAGGACTTGGCACTCTACTAAAACCACTAAGTGGAGGTAAGG  
TGTAGCTAGTTTGAACCAGAGTGCCTGAGCCGTCCAATGCAAAGGAACTAGTTACACTTGTAACTGT  
CAACTGGTGAAGAAGAAGGTCGTGTCAGAGCTATGCGAGCGGCCGTTCACTAGGAGAAAGAACTGTGA  
CAGAACTGATACTGCAGCACCAAGCCCTCAGCAGCTGTCTGCCAACCTGTGGGCTGCTGTGAGGCTCG  
AGGATGCCAGTTTCTAGGGCCAGCTATGCAAGAAGAAGCCTTGAAGTTGGTATTGCTGGCATTAGAAGAT  
GGTTCTGCTCTCTAGGAAAGTTCTAGTACTTTTTGTTGTGCAAAGACTAGAACCAAGATTTCTCAGG  
CATCAAAAACAAGTATTGGCCATGTTGTGCAGCTATTGTACCGAGCTTCTGTTTTAAGTTACTAAAAG  
GGATGAGACTCTCCCTGATGCAGCTAAAGGAGGAATTCGGAGTTACGAGGCACTACGCAGAGAACAT  
GATGCCAGATTGTTTCATATTGCCATGGAAGCAGGACTCCGATTTTACCTGAGCAGTGGTCTTCACTGC  
TGTATGGGACTTGGCTCATAAATCACACATGCAGTCTATCATTGATAAGCTACAGTCTCCAGAATCATT  
TGCAAAGAGTGTCCAGGAATTGACAATGTTTTGCAGCGAACTGGTGACCCTGCTAATTTAAATAGGCTG  
AGACCTCATTTAGAGCTTCTTGCAAACATAGACCCATATCCAGATGCTGTTTACCAACTTTGGGAGCAAC  
TGGAAAATGCAATGGTAGCTGTTAAAACAGTTGTTTCATGGTCTTGTGGACTTCATACAAAATTATAGTAG  
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CAACAAGGGGTTGTCCACGAGGAACAAATTGTACATTTGCCATTCTCAGGAAGAGCTTGAAGTACC  
GATTAAGGAACAAAAGATGAGCGGACTGTAAGAACATTTCTCTTCTGAATAAAGTTGGTGTAAACAG  
CACTGTCAACAACACAGCCGAAATGTCATTTCTGTCATAGGAAGTACTGAAACAACCTGGGAAAATTGTT



GCAAGTACAAATGGAATTTCAAATACAGAAAGCAGTGTTTCTCAGCTAATCCCACGAGGCACTGACAGTG  
 CAGTAAGGACTTTGGAGACTGTGAAGAAAGTCGGGAAGGTTGGCACTAATGCTCAGAATGCTGGGCCCTC  
 TGCAGAGTCCGTGTCTGAAAATAAAATGGTTCTCCACCAAGACTCCTGTAAGTAAATGCAGCAGCTACC  
 TCCGCTGGGCCCTCTAATTTTGGAAACAGAGCTGAATTCCTGCCTCCCAAATCCAGCCCATTCTAACTA  
 GAGTTCAGTATATCCTCAGCATTCTGAAAGCATTGATATTTCAAGATCCAAGGACTCAGATACCTTT  
 TGAAGTCCCACAATACCCACAACAGGATACTACCCACCACCTCCAACGGTACCAGCTGGTGTGACTCCC  
 TGTGTTCCCTCGCTTTGTGAGGTCAGTAATGTTCCAGAGTCCCTCCCTCCACCTGCTTCCATGCCATATG  
 CTGATCATTACAGTACATTCTCCCTCGAGATCGAATGAATTCTCTCCTTACCAACCTCCTCCTCGCA  
 GCAGTATGGACCAGTTCCTCCAGTACCCTCTGGAATGTATGCTCCGGTGTATGACAGCAGGCGCATCTGG  
 CGCCAGCTATGTACCAACGAGATGACATTATTAGAAGCAATTCTTTACCTCCAATGGATGTGATGCACT  
 CATCTGTCTATCAGACATCTTTACGGGAAAGATACAACCTATTAGATGGATATTATTGAGTGGCTTGTCA  
 GCCACCGAATGACCAAGGACAACCTGTGCCTTTACCAAGGGAACCTTGTGGTCATTTGAAGACCAGTTGT  
 GAGGAACAGTTAAGAAGAAAGCCAGATCAGTGGACACAGTATCATACCCAGAAAACCTGTCTCTTCAA  
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 ACCATAGGCTCTGTATAAATGCCATTGATTCCGAGCCCAAGAGCTAATTGCTAATTCAAATGCTGTAT  
 TGATGGACCTGGACAGTGGGGATGTAAAGAGAAGAGTGCAATTTATTTGAGCTCAGAGAAGGACAAAAGA  
 AGAAGACCAATTATCCCTTTAGTGACGGACCCATTATCTAAAATGGGGTGAATTTCCCGATCCTCC  
 CGAACAGGTTACCATAACAACAGATCCCCTCCAGGCAACTGCTTCCCAAGGAAGTGAACCTAAGCCCATCA  
 GCGTATCAGATTATGTCCTTACGTGAATGCTGTGCGATTAAGGTGGAGTTCATATGGCAACGATGCTAC  
 ATCATCAGCACTATATTGAACGGGACAGATTGATTGTTACTGATTTATCTGGTCATAGAAAGCATTCT  
 AGTACCGGAGACCTTTTGAGCATTGAACCTCAGCAGGCCAAGAGTAACTACTTCTTCCAGAGGGAAG  
 CTAATGCTCTGGCCATGCAACAAAAGTGAATTCCTGGATGAAGGCCGTACCTTACTTTAAATCTTCT  
 AAGCAAGGAAATTTGAACCTAAGAAATGGAGAGAATGACTACACAGAAGACACTGTAGATACAAAGCCTGAT  
 AGGGATATTGAGTTAGAGCTTTAGCCCTTACTGATGTAACCTGATGGCCAGAGTGAACAAATTTGAAG  
 AAATTTTGGACATACAACCTTGGTATCAGTTCTCAAATGACCAGTTGCTCAATGGAACAGCAGTGGAAAA  
 TGGTATCCAGCCAGCAGCACCAGAAGGACCCAGGAAAGCCGAAGAGACAGAGTTTAGGTGAAGACCAT  
 GTGATTCTGGAGGAGCAAAAACCAATTCTGCCGTAACATCTTGCTTTAGCCAGCCACGTCCAATGTCTA  
 TTAGCAGTGAAGCTGCCTCCCATCACCACATCTGTGAGTGGCAACCTCATTCTGAAAACCTACGT  
 TATGTCTGAAGATAAAAACGACTTTTTAAACCTATTGCAAATGGGAAGATGGTTAACAGCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:**

Sgfl-Mlul

**ACCN:**

NM\_001100591

**Insert Size:**

3564 bp

**OTI Disclaimer:**

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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\\_001100591.1](#), [NP\\_001094061.1](#)

**RefSeq Size:** 8981 bp

**RefSeq ORF:** 3564 bp

**Locus ID:** 319817

**UniProt ID:** [P0C090](#)

**Cytogenetics:** 2 B

**Gene Summary:** Post-transcriptional repressor of mRNAs containing a conserved stem loop motif, called constitutive decay element (CDE), which is often located in the 3' UTR, as in HMGXB3, ICOS, IER3, NFKBID, NFKBIZ, PPP1R10, TNF and in many more mRNAs. Binds to CDE and promotes mRNA deadenylation and degradation. This process does not involve miRNAs (PubMed:23663784). In follicular helper T (Tfh) cells, represses of ICOS and TNFRSF4 expression, thus preventing spontaneous Tfh cell differentiation, germinal center B-cell differentiation in the absence of immunization and autoimmunity. In resting or LPS-stimulated macrophages, controls inflammation by suppressing TNF expression. Also recognizes CDE in its own mRNA and in that of paralogous RC3H1, possibly leading to feedback loop regulation (PubMed:23583643, PubMed:23583642). Inhibits cooperatively with ZC3H12A the differentiation of helper T cells Th17 in lungs. They repress target mRNA encoding the Th17 cell-promoting factors IL6, ICOS, REL, IRF4, NFKBID and NFKBIZ. The cooperation requires RNA-binding by RC3H1 and the nuclease activity of ZC3H12A (PubMed:25282160). miRNA-binding protein that regulates microRNA homeostasis. Enhances DICER-mediated processing of pre-MIR146a but reduces mature MIR146a levels through an increase of 3' end uridylation. Both inhibits ICOS mRNA expression and they may act together to exert the suppression (PubMed:25697406). Acts as a ubiquitin E3 ligase. Pairs with E2 enzymes UBE2B, UBE2D2, UBE2E2, UBE2E3, UBE2G2, UBE2K and UBE2Q2 and produces polyubiquitin chains. Show the strongest activity when paired with UBE2N:UBE2V1 or UBE2N:UBE2V2 E2 complexes and generate both short and long polyubiquitin chains. Involved in the ubiquitination of MAP3K5 (By similarity). Able to interact with double-stranded RNA (dsRNA).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (a). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.