

## Product datasheet for MR211714

### Adar (NM\_019655) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Adar (NM_019655) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Adar
Synonyms:	Adar1; Adar1p110; Adar1p150; AV242451; mZaADAR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR211714 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCTCAAGGGTTCAGGGGACCCACAGGGGTGTTCCCTCACCAGACACAGTCGTA  
ACTCGGACCCTAGTCATGAGCATAGCAAGTGGAGATACCTGCAGCCACAGGGCCGGAGTCTTACCCTAGGAGTTCCAGCTTCA  
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CAGGTTGTCATCAATGGGCGGAATTTCCCCAGCTGAGGCTGGCAGCAAGAAAGTAGCCAAGCAGGACG  
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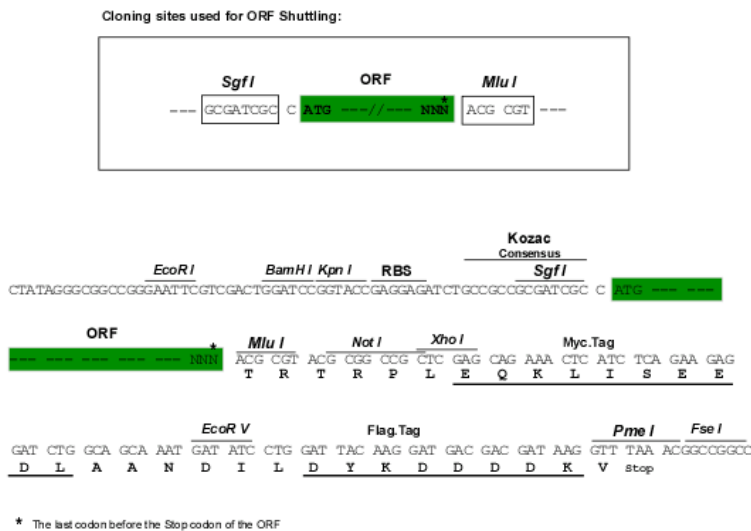
**Protein Sequence:** >MR211714 protein sequence  
 Red=Cloning site Green=Tags(s)

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GVVNPDCIQEFPRGEPGLDSEDDPASPDLGEPSEPLDMAEIKEKICDYLFNVSNSALNLAKNIGLTKA
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GASSVAASKRVENGQEPAIKHSRHEARPGPMRLRPHAYHNGPSRAGYVASENGQATDDIPDNLNSIH
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```

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**Restriction Sites:** SgfI-MluI  
**Cloning Scheme:**

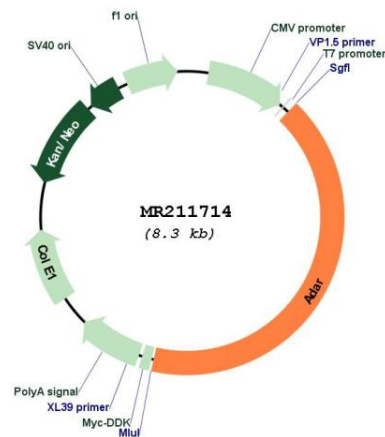


**ACCN:** NM\_019655  
**ORF Size:** 3459 bp

<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_019655.2</a>
<b>RefSeq Size:</b>	5850 bp
<b>RefSeq ORF:</b>	3459 bp
<b>Locus ID:</b>	56417
<b>UniProt ID:</b>	<a href="#">Q99MU3</a>
<b>Cytogenetics:</b>	3 F1
<b>MW:</b>	127.7 kDa

**Gene Summary:**

Catalyzes the hydrolytic deamination of adenosine to inosine in double-stranded RNA (dsRNA) referred to as A-to-I RNA editing. This may affect gene expression and function in a number of ways that include mRNA translation by changing codons and hence the amino acid sequence of proteins; pre-mRNA splicing by altering splice site recognition sequences; RNA stability by changing sequences involved in nuclease recognition; genetic stability in the case of RNA virus genomes by changing sequences during viral RNA replication; and RNA structure-dependent activities such as microRNA production or targeting or protein-RNA interactions. Can edit both viral and cellular RNAs and can edit RNAs at multiple sites (hyper-editing) or at specific sites (site-specific editing). Its cellular RNA substrates include: bladder cancer-associated protein (BLCAP), neurotransmitter receptors for glutamate (GRIA2) and serotonin (HTR2C) and GABA receptor (GABRA3). Site-specific RNA editing of transcripts encoding these proteins results in amino acid substitutions which consequently alters their functional activities. Exhibits low-level editing at the GRIA2 Q/R site, but edits efficiently at the R/G site and HOTSPOT1. Does not affect polyomavirus replication but provides protection against virus-induced cytopathic effects. Essential for embryonic development and cell survival and plays a critical role in the maintenance of hematopoietic stem cells. [UniProtKB/Swiss-Prot Function]

**Product images:**

Circular map for MR211714