

## Product datasheet for **MG218722**

### Adar (NM\_001038587) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Adar (NM_001038587) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Adar
Synonyms:	Adar1; Adar1p110; Adar1p150; AV242451; mZaADAR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG218722 representing NM\_001038587  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCTGAAATCAAGGAGAAGATCTGTGACTATCTGTTCAATGTGTCAAACCTCCTCTGCCCTGAACCTGG  
 CTAAGAACATTGGCCTCACCAAGGCCCGAGATGTGACCTCAGTGCTGATTGACTTGGAAAGCAAGGCGA  
 TGCTACAGGCAAGGGCAACTCCTCCCATCTGGTACTTGACGGACAAGAAGCGTGAGAGGCTGCAGATG  
 AAGAGAAGTACACACAGTGTCTCTGCCCTACCCGACAGCTGTCCAGAGGCCACTAGAAGCCCCTCAT  
 TCCCTGCCTGCCACCCGCCCCAGCAGGTGCCTCAAGCAGTGTGGCAGCCTCCAAGAGAGTGGAGAATGG  
 GCAGGAGCTGCGATAAAGCATGAAAGTAGGCATGAGGCCAGACCAGGACCAATGAGACTGCGGCCCTCAC  
 GCTTATCACAAATGGCCCCTAGAGCAGGGTATGTGGCCTCTGAAATGGCCAGTGGGCCACAGATGACA  
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 CTACAGCCCTACCTTGCCACGGTGTTCACCTACAAGAAGCTAACTGAGTGCCAGCTGAAGAACCCTGTC  
 AGCGGGTTGTTAGAGTATGCTCAGTTCAGTACAGACCTGTGATTTCAACCTGATAGAGCAGAGTGGAC  
 CGTCCCATGAACCTCGATTTAAATTCAGGTTGTCATCAATGGGCGGGAATTTCCCCCAGCTGAGGCTGG  
 CAGCAAGAAAGTAGCCAAGCAGGACGCAGCAGTAAAAGCCATGGCGATTCTGCTTCGGGAAGCCAAAGCC  
 AAAGACAGTGGTCAACCAGAAGACTTGTCCACTGTCCATGGAAGAAGACTCGGAGAAACCAGCAGAGG  
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 CATGCACAAACTAGGGAACCTCTGTGAATTCGCTCTCTGTCCAAAGAAGGCCCTGCTCATGACCCCAAG  
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 CGGGTCTTGATCGGGGAGAGCGAGAAGGCAGAGCAGTTGGGTTTTCGAGAGGTAACCCAGTAACAGGGG  
 CCAGTCTCAGAAGAACTATGCTCCTCCTTCCAGGTCCCAGATGCACATCCAAAGACACTTCTCTCTC  
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 CAGCCCTCCTGCTCGGCCGCAAGATCCTGGCTGCCATTATTATGAAAAGAGATCCAGAGGACATGGGTG  
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 CAATGACTGCCATGCCGAAATCATCTCCCGGAGGGGCTTCATCAGGTTTCTCTACAGTGAACCTGATGAAG  
 TACAACCACCACTGCCAAGAACAGCATATTTGAGCTTGCCAGGGGAGGAGAGAAGCTGCAGATAAAGA  
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 GATGGCACCAGAGGCACTGTGGATGGACCAGGAAAGAGTTGTCTCGGGTGTCCAAGAAGAATATTTTCC  
 TTCAGTTAAGAAGCTCTGCTCCTCCGAGCCCGCAGAGATTTACTGCAGCTCTCTTATGGTGAAGCCAA  
 GAAAGCTGCCGTGACTATGACTTAGCCAAGAATACTTCAAGAAAAGCCTGCGAGACATGGGCTATGGG  
 AATTGGATCAGCAAAACCCAGGAGGAAAAGAACTTTTACCTCTGTCCAGTACCCAATGAC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG218722 representing NM\_001038587  
 Red=Cloning site Green=Tags(s)

MAEIKEKICDYLFNVSNSALNLAKNI GLTKARDVTSVLIDLERQGDVYRQGATPPIWYLTDKKRERLQM  
 KRSTHSAPAPTAVPEATRSPSPFACHPPPAGASSVAASKRVENGQEPAIKHESRHEARPGPMRLRPH  
 AYHNGPSRAGYVASENGQWATDDIPDNLNSIHTAPGEFRAIMEMPSFYSPTLPRCSPYKLTTECQLKNPV  
 SGLLEAYAQFTSQTCDFNLEIQSGPSHEPRFKFQVVINGREFPPAEAGSKKVAKQDAAVKAMAILLREAKA  
 KDSGQPEDLSHCPEEDSEKPAEAQAPSSATSLFSGKSPVTTLLECMHKLGNSCFRLLSKEGPAHDPK  
 FQYCVAVGAQTFPPVSAPSKKVAKQMAAEEAMKALQEEAASSADDQSGGANTDSLDESMAPNKIRRIGEL  
 VRYLNTNPVGGLEAYARSHGFAAEFKLIDQSGPPHEPKFYQAKVGGWFPVAVCAHKKQKQDAADAAL  
 RVLIGESEKAEQLGFAEVPVTGASLRRTMLLSRSPDAHPTLPLSGSTFHDQIAML SHRCFNAL TNSF  
 QPSLLGRKILAAIIMKRDPEMGMVVVSLGTGNRCVKGDSLKGETVNDCHAEIISRGRGIRFLYSEL MK  
 YNHHTAKNSIFELARGGEKLQIKKTVSFHLYISTAPCGDGALFDKSCSDRAVESTESRHPYVFENPKQK  
 LRTKVENGEGTIPVSSDIVPTWDGIRLGERLRTMSSDKILRWNVLGLQGALLTHFLQPVYLYKSVTLGY  
 LFSQGH LTRAIICRVTRDGKAFEDGLRYPFIVNHPKVGRVSVYDSKRQSGKTKETSVNWCMDAGYDLEIL  
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 NWISKPQEEKNFYLCVPVND

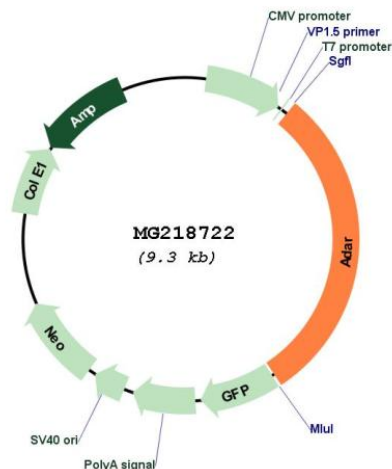
TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



**Plasmid Map:**


**ACCN:** NM\_001038587

**ORF Size:** 2790 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).

**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\\_001038587.4](#), [NP\\_001033676.2](#)

**RefSeq Size:** 5936 bp

**RefSeq ORF:** 2793 bp

**Locus ID:** 56417

**Cytogenetics:** 3 F1

**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]