

Product datasheet for **RR210052**

Oas2 (NM_001009715) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Oas2 (NM_001009715) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Oas2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RR210052 representing NM_001009715
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGAAACTGGATGCCTGGCTGGTCCAGTGGGTCTTTGGGGTGCCCCCATGCCAGTGCAGAAGC
 TAGAAAAGTCTGTCCAGGTAACCTTGAACCAGATGAAAAATGTCTGAGTCAGACCGAGGTGCCTCTGT
 ACCATCCCAGAAGCTAGAAGAATATATCCAGGCAAACCTCAAACCCGATGAAGAATCTCTGAAGCAGATA
 GACCAGGCTGTGGATGCCATCTCTGACCTGCTGTGCAGTGAGGTGATGATCGATGTGCTGAAAGTGGTTA
 AGGGTGGCTCCTATGGTCGAAAAACAGTCTAAGAGACTGCTCCGATGGTACACTTGTCTCTCCACCGG
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 AAAAGCCATGAGAAATACAAGAAGTCAGTAAACGTAACCTAGCCTCCTGAAGTACAAGTGTCTATAC
 CAGGGCAGAGTAACTCTTGCAGTTGCTTCCAACCTTCAATCCTCTGTGCATCAGTGAGAATCCCAGCGC
 CCAGGTCTATCAGAATCTCAAAGATCCATGGATCAAGTAAAAGCATCACCTGGGGAATTCTCAGACTGC
 TTCACCACACTGCAGCAGAGTTTTTCGAGAAATATCCCGGAGACTGAAGGATTTGATTCTATTGGTCA
 AGCACTGGTATAAACAGTTGCAGGATAAGTGGATAATACCCTCACCTCCGCCATTGCTATATGCACTGGA
 GCTGCTTACTGTGTATGCCTGGGAACAGGGCTGCCAGACTAAAGACTTTGACATCACGCAAGGTATCAGG
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 CCCAACCAACAATGTGGGCAAAGATGACAGGTTCTGGCAGCTACTGGCAGAAGAGGCTCAGGAGTGGCTG
 AACTCTCTCAGACTGAATAAGCCACACAAACCATGTTGGGATGTTCTGCCATGCCATTTTTATCACCC
 CAAGCACTGCCCTGGACAAGTTCATCAAAGACTTCCTCCAACCTGACAAGGCTTCTCTAAACCAAAATCAA
 AAGAGCTGTTGACATTATCTGTTTCACTTCTAAAAGAGACCTGCTTCCAGAATTCTGACATCAAAGTCTCTG
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 GCTGTATGCCTCACAGGACAGCCTCAAAGGAGGGGAGTTTTTCACTGTGTTTACAGAGCTACAGAGAGAC
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 GGAGCATGGCAGTGGCACAGATGGCTTCGACACTGCTGAAGGCTTCCGGACCGTCTGGACTTGGTCATA
 AGATACCGGCAGCTCTGCGTCTTCTGGACAGTCAATTACAACCTTTGAGGAGGATCACATGAGGAAGTTCC
 TACTGACCAGATCCAGAAAAAGAGGCTGTGATCCTGGATCCAGCAGATCCCACAGGTGATGTGGGAGG
 AGGTGACCGTGGTGTGGCATCTTCTAGCCAAAGAAGCAAAGGAGTGGCTGTCTCCTCTGTTTCCAA
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 AGATCTACCCTGTGGTGGGTGGGTGTAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR210052 representing NM_001009715
 Red=Cloning site Green=Tags(s)

MGNWMPGWSSSGSLGVPMPVQKLEKSVQVNLPEDEKCLSQTEVSSVPSQKLEEYIQANLKPDEESLKQI
 DQAVDAISDLLCSEVMIDVLKVVKGGSYGRKTVLRDCSDGTLVLFGLFKQFQDQKKYQDKLLDLIEQRL
 KSHEKYKKSVKRKL SLELVQVSIPGQSILLQLLPTFNPLCISENPSAQVYQNLKRSMQV KASPGEFSDC
 FTTLQQRFFEKYPGRKDLILLVKHWYKQLQDKWIIPSPPLL YALELLTVYAWEQGCQTKDFDITQGIR
 TVLQLISQPTNLCVYWLDNYNFEDETVRNLLHQLNSPRPVILDPDPTNNVGKDDRFWQLLAEEAQEWL
 NSLRNLNPKHPKPCWDVLPMPFFITPSHCLDKFIKDFLQDPKVF LNQIKRAVDIICSFLKETCFQNSDIKVL
 KIIKGGSTAKGTALQQRSDADIIVFLSLSDSYDSLETQRSYVQEIRKQLEACQAFNLGVKFDISKWMA
 PRVLSFTLESKSLKQSVFEDVLPAYDALGQLRSDYTSRLKAYKKLIELYASQDSLKGGFESVCFTELQRD
 FIETRPTKLKGLIRLIKHWYKQCERKMKPKASLPPKYALELLTVYAWEHGSGTDGFDTAEGFRVLDLVI
 RYRQLCVFWTVNYNFEEDHMRKFLLTQIQKRPVILDPADPTGDVGGDRWCWHL LAKEAKEWLSSSCFQ
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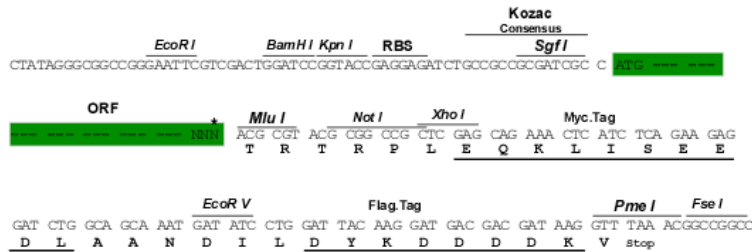
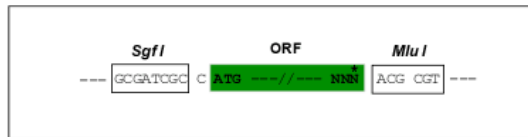
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001009715

ORF Size: 2199 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_001009715.1](#), [NP_001009715.1](#)

RefSeq Size: 2274 bp

RefSeq ORF: 2202 bp

Locus ID: 363938

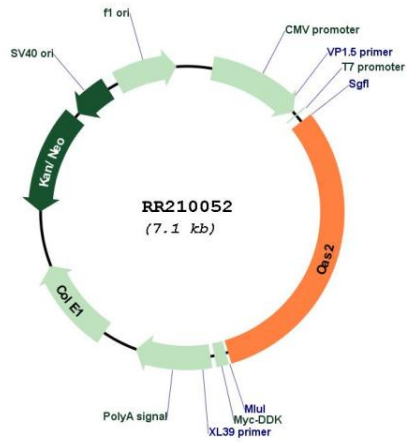
UniProt ID: [Q5MYU0](#)

Cytogenetics: 12q16

MW: 84.1 kDa

Gene Summary: Interferon-induced, dsRNA-activated antiviral enzyme which plays a critical role in cellular innate antiviral response. Activated by detection of double stranded RNA (dsRNA): polymerizes higher oligomers of 2'-5'-oligoadenylates (2-5A) from ATP which then bind to the inactive monomeric form of ribonuclease L (RNASEL) leading to its dimerization and subsequent activation. Activation of RNASEL leads to degradation of cellular as well as viral RNA, resulting in the inhibition of protein synthesis, thus terminating viral replication. Can mediate the antiviral effect via the classical RNASEL-dependent pathway or an alternative antiviral pathway independent of RNASEL. In addition, it may also play a role in other cellular processes such as apoptosis, cell growth, differentiation and gene regulation (By similarity). May act as a negative regulator of lactation, stopping lactation in virally infected mammary gland lobules, thereby preventing transmission of viruses to neonates (By similarity). Non-infected lobules would not be affected, allowing efficient pup feeding during infection (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RR210052