

## Product datasheet for **MR216848**

### Wdr4 (NM\_021322) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Wdr4 (NM_021322) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Wdr4
Synonyms:	AI415180; AI448349; D530049K22Rik; Wh
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>MR216848 representing NM\_021322  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGAGACTACGCCCTGCGCGCATGCTCCTGGACGGCACGCCGTTGCGCGGCCCGGAGTGACATCACTGA  
 CAAGCGCCAACAGGAAGGGCGCAGCGCGTGCACGTGTCCGGAGGCGGGCGGGCCCATGGCAGCTC  
 TGGCGGGCTGGCACTGTGCGCCCAGACGCTGGTGGTGCAGGAGGCAGCCGGTTCCTAGCCTTCTCCACT  
 ACGGGCAGTGATGACTGTGTCTTACATACGACTGCAGTACTGCAGAGAAGAAGGCCACGCCAGAAG  
 ATAAAGGGGAGGACGGACAGCCCGACACAGGGAGTGACTCGATTCTGGCGTCCACCTTCTCCAAGTC  
 TGGCCGCTATTTGCTTTAACAGATGACAGTAAGCGTCTGATTCTTTCCGTACAAAACCATGGCAATGT  
 CTGAGTGCAGGATGGTGGTGGAGGTGCACCGCCCTGACCTTACAGCCTCAGAGGACCGAGTCTTGG  
 TGGCTGACAAGTCTGGAGACGTCTACTCCTTTCCGGTGTGGAGCCAGATGGATGTGGCAGGCTGGAGCT  
 TGGGCACCTCTCCATGCTGCTAGACGTGGCTGTGAGTCTGATGACCAGTTTGTGCTTACTGCAGACCGG  
 GATGAGAAGATCCGGGTAGCTGGGCTGCTGCCCGCATAGCATCGAGTCTTTCTGCCTGGGACACACTG  
 AGTTTGTGAGCCGCATCCTTGTAGTGCCAGTCACTCTGAAGTGTGCTTTCTTCTCTGGGATGGCAC  
 CCTGAGACTCTGGGAGTACAGAAGCGGTAGGCAGCTGCAGTGTGTGACCTGGCCGGCCTACAGGAGCCT  
 GGAGAGCAGCCAGGCCACAAGGGTTGGCCCGCTCCAGGATTGCATTCTGGGGACAGGAGAGCTATGTGG  
 TGCTTCTGTGTGAGTGCCTTCCCGTGGTCTTGTCTTCCAGCTTGTGATGCCAGCAGACAGCAGCTGGTGT  
 CAGACAGCGGCTGACTTTCCCTACCGAGTGTGGGATGTTGTGTTGAGGAGGCCCGGGGCTGTGGGT  
 CTACAGGACTGCCGTGATGCCCCCTGGTGTCTGGAGGCCTGTGGTGGTGGTGGCAGGCTGCTCCAG  
 ACGGTGCTGTGTCGCCGAGACTCTGCAGCCATCTCCGTGAGAGCTGGCCATGCTGGAAGTTCGTTGG  
 TACAGATGACAGCTTCCGACGCTGTACAAGGCCACCTTTGACAACATGACCTCTTACCTGAAGAAAAAG  
 GAAGAGAGACTGCAGCAGCAGCTGAAGAAGAAGCGGCAAAGGAGCCCTTCCAGGGTCCCCGGAACAGA  
 CAAAAAGGCGTGCCCGGCCAGTCAGCCCTTAGTTGC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR216848 representing NM\_021322  
 Red=Cloning site Green=Tags(s)

MRLRPARMLLDGTPFARRRVTSLSANRKAARRTCPEAAGGPMASAGLALCAQTLVVRGGSRFLAFST  
 TGSDDDCVFTYDCSTAEKATPEDKGEDQPADTGSDSILASTFSKSGRYFALTDDSKRLILFRTPWQC  
 LSVRMVRRCTALTFTASEDRVLVADKSGDVYSFVLEPDGCGRLELGHLSMLLDVAVSPDDQFVLTADR  
 DEKIRVSWAAAPHSIESFCLGHTEFVSRILVVPSPHELLLSSSGDGTLRLWEYRSGRQLQCCDLAGLQEP  
 GEQPGHKGLAASRIAFWQESYVLLCECVPVFVFQLDASRQQLVFRQRLTFPHRVWDVVFEEARGLWV  
 LQDCRDAPLVLRPVGGEWQAAPDGA VSPRLCSHLRESWAMLEGSVGTDDSFRLYKATFDNMTSYLKKK  
 EERLQQQLKKRQRSPFPGSPEQTKKACPGQSALSC

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

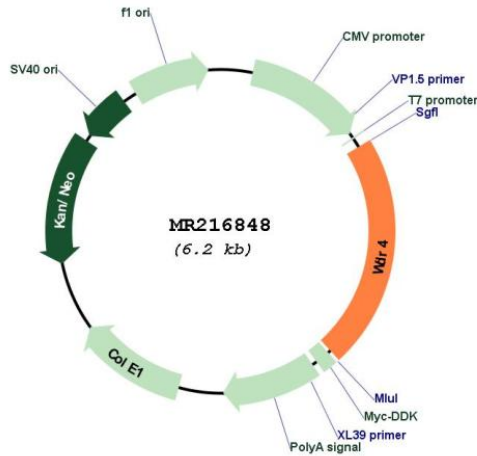
Cloning Scheme:

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM\_021322  
 ORF Size: 1368 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_021322.2](#), [NP\\_067297.2](#)

**RefSeq Size:** 3906 bp

**RefSeq ORF:** 1371 bp

**Locus ID:** 57773

**UniProt ID:** [Q9EP82](#)

**Cytogenetics:** 17 B1

**MW:** 50.9 kDa

**Gene Summary:**

Non-catalytic component of a methyltransferase complex required for the formation of N(7)-methylguanine in a subset of RNA species, such as tRNAs, mRNAs and microRNAs (miRNAs) (PubMed:29983320). In the methyltransferase complex, it is required to stabilize and induce conformational changes of the catalytic subunit (By similarity). Required for the formation of N(7)-methylguanine at position 46 (m7G46) in tRNA (PubMed:29983320). Also required for the formation of N(7)-methylguanine at internal sites in a subset of mRNAs (By similarity). Also required for methylation of a specific subset of miRNAs, such as let-7 (By similarity). Acts as a regulator of embryonic stem cell self-renewal and differentiation (PubMed:29983320). Independently of METTL1, also plays a role in genome stability: localizes at the DNA replication site and regulates endonucleolytic activities of FEN1 (PubMed:29574139). [UniProtKB/Swiss-Prot Function]