

Product datasheet for **RR211857**

Ddx4 (NM_001077647) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ddx4 (NM_001077647) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ddx4
Synonyms:	RVLG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RR211857 representing NM_001077647
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGAGATGAAGATTGGGAGGCAGAAATCCTCAAACCTCATGTGTCTTCTACGTTCTCTGTATTTGAGA
 AGGATAAATATTTCTTCTGGGGCAAATGGAGACACTTTTAAACAGGACTTCAGCTTCATCATCAGAAATGGA
 AGATGGACCTTCTGGAAGAGATCAATTCATGAGAAGTGGATTTTCTCTGGAAGAAATTTAGGAAACAGA
 GATATTGGCGAGTCTAGTAAAAGAGAGACTACATCTACAACCGGTGGCTTTGGAAGAGGAAAGGGTTTTG
 GAAACAGAGGTTTTTAAATAACAAGTTTGAAGAAGGTGACAGCTCTGGTTTCTGGAAAGAGTCTACTAA
 TGACTGTGAAGATACTCAGACTCGGAGCAGAGGGTTTTCCAAGCGAGGCGGCTATCCAGATGGGAATGAT
 TCGGAAGCTTCAGGCCATTCAGAAGAGGTGGGAGAGATAGTGAATATGACCAAGATCAGGGATCACAGC
 GTGGTGGTGGCCTTTTTGGTTCTAGGAAACCAGCAGCAAGTGATTCAGGCAGTGGTGACACTTTCCAGAG
 CAGAAGTGGGAATGCCCGAGGTGCTACAAAGGCTTAAATGAAGAAGTAGTAACAGGCTCTGGAAGAAT
 TCTTGGAAAGTCAGAAGCTGAAGGAGGCGAAAGCAGTGATATTCAAGGTCCAAAAGTGACATATATACCCC
 CTCTCCACCAGAGGATGAGGACTCCATCTTTGCACATTATCAGACAGGCATAAACTTTGATAAATATGA
 TACCATACTTGTGAAGTATCTGGACATGATGCACCACCGGCAATTTTGACTTTTGAAGAAGCGAATCTC
 TGCCAGACCCTGAATAACAACATTGCTAAGGCTGGCTATACCAAGCTCACTCCTGTGCAGAAGTACAGCA
 TTCCCATTGTGTTAGCAGGAAGAGATTTGATGGCTTGCTCAAACAGGGTCTGGGAAGACGGCAGCTTT
 TCTCTTGCCATTTTTGGCTCATATGATGAGGGATGGAATAACTGCCAGTCGCTTTAAAGAAGTGCAGGAA
 CCAGAGTGTATTATTGTAGCACCAACTCGAATTTGATCAACCAATTTATTTGGAAGCCAGAAAAATTTT
 CTTTTGGGACTTGTGAAGAGCTGTTGCATATATGGAGGAACCCAGTTTGGGCACTCAATTCGACAGAT
 AGTGCAAGGGTGTAAATATATTATGTCTACTCCAGGGAGGCTGATGGATATCATAGGCAAAGAAAAAGATT
 GGTCTCAAACAAGTCAAGTACTTGTGTTGGATGAAGCTGATCGAATGTTGGATATGGGTTTTGGACCCG
 AAATGAAGAAGTTAATTTCTTGTCCAGGAATGCCATCAAAGGAACAGCGCCAACTCTCTTATTCAGTGC
 AACTTTTCCAGAAGAAATCCAGAGGTTGGCTGGCGAGTTTTTAAAGTCAAATTTTGTGTTGCTGTT
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 AGCAGATTTTCATTGCGACTTTCTTTGTCAAGAAAAAATCAACTACAAGTATTCATGGCGATCGGGAA
 CAGAGGGAGCGAGAACAAGCTCTTGAGATTTTCTGCTGTGGAAGTGCCAGTCTTGTGCTACTTCAG
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 TGAATATGTTTCGAATTGGACGACTGGACGTTGTGGAATACTGGCAGGGCGATTTCTTTTTTGTAT
 ACCGAATCTGATAATCATTTAGCACAACCTCTAGTTAAAGTACTGTCAGATGCTCAACAGGATGTTCTCTG
 CGTGGTTAGAAGAGATTGCCTTTAGTTCATATGCGCCTCCAGCTTCAGTAATAGCACAAGAGGGGCTGT
 GTTTGCATCTTTTGACACTAGGAAGAATTTCCAGGGCAAGAACACACTGAACACAGCTGGGATTTCTTCT
 GCACAAGCTCCCAATCCAGTTGATGACGAGTCATGGGAT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR211857 representing NM_001077647
 Red=Cloning site Green=Tags(s)

MGDEDWAEILKPHVSSYPVFEKDKYSSGANGDTFNRTSASSSEMEDGPSGRDHFMRSGFSSGRNLGNR
 DIGESSKRETTSTTGGFGRGKGFNGRGLNKKFEEDSSGFWKSTNDCEDTQTRS RGF SKRGGYPDGND
 SEASGPFRRRGRDSEYDQDQGSQRGGGLFGSRKPAASDSGSGDTFQSRSGNARGAYKGLNEEVVTGSGKN
 SWKSEAEGGESSDIQGPKVYIIPPPPEDEDSIFAHYQTGINFDKYDTILVEVSGHDAPPAILTFEEANL
 CQTLNNNIAKAGYTKLTPVQKYSIPIVLAGRDLMACAQ TGS GK TAAFLLPILAHMMRDGITASRFKELQE
 PECCIIVAPTRELINQIYLEARKFSFGTCVRAVVIYGGTQFGHSIRQIVQGCNILCATPGRMLDIIGKEKI
 GLKQVKYLVLDEADRMLDMGFGPEMKKLI SCPGMPSKEQRQTL LFSATFPEEIQLRAGEFLKSNLYFVAV
 GQVGGACRDVQQSILQVGPVFKRKLVEILRNIGDERPMV FVETKKKADFIATFLCQEKISTTSIHGDRE
 QREREQALGDFRCGKCPVLVATSV AARGLDIENVQHVINFLPSTIDEYVHRIGRTGRCGNTGRAISFFD
 TESDNHLAQPLVKVLSDAQDVPALWEEIAFSSYAPPSFSNSTRGAVFASFDRKNFQGKNTLNTAGISS
 AQAPNPVDDSWD

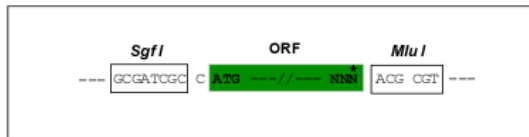
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001077647

ORF Size: 2139 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_001077647.1](#), [NP_001071115.1](#)

RefSeq Size: 3030 bp

RefSeq ORF: 2142 bp

Locus ID: 310090

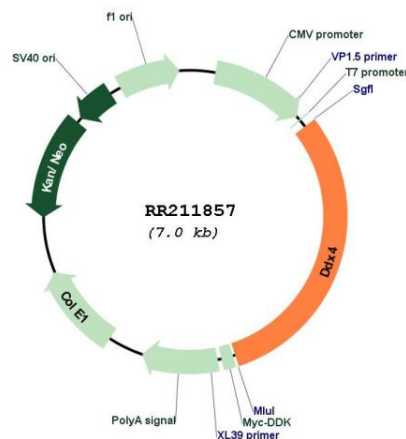
UniProt ID: [Q64060](#)

Cytogenetics: 2q14

MW: 78 kDa

Gene Summary: ATP-dependent RNA helicase required during spermatogenesis to repress transposable elements and preventing their mobilization, which is essential for the germline integrity. Acts via the piRNA metabolic process, which mediates the repression of transposable elements during meiosis by forming complexes composed of piRNAs and Piwi proteins and governs the methylation and subsequent repression of transposons. Involved in the secondary piRNAs metabolic process, the production of piRNAs in fetal male germ cells through a ping-pong amplification cycle. Required for PIWIL2 slicing-triggered piRNA biogenesis: helicase activity enables utilization of one of the slice cleavage fragments generated by PIWIL2 and processing these pre-piRNAs into piRNAs.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RR211857