

## Product datasheet for **RC204171**

### DDX3 (DDX3X) (NM\_001356) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	DDX3 (DDX3X) (NM_001356) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DDX3X
Synonyms:	CAP-Rf; DBX; DDX3; DDX14; HLP2; MRX102; MRXSSB
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



[View online »](#)

ORF Nucleotide  
Sequence:

>RC204171 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGAGTCATGTGGCAGTGAAAAATGCGCTCGGGCTGGACCAGCAGTTTGTGCTGACCTGAACCTCTT  
CAGATAATCAGAGTGGAGGAAGTACAGCCAGCAAAGGGCGCTATATTCCTCCTCATTAAAGGAACCGAGA  
AGCTACTAAAGGTTTCTACGATAAAGACAGTTCAGGGTGGAGTTCTAGCAAAGATAAGGATGCGTATAGC  
AGTTTTGGATCTCGTAGTGATTCAAGAGGGAAGTCTAGCTTCTTCAGTGATCGTGGAAAGTGGATCAAGGG  
GAAGGTTTGTGATCGTGGACGGAGTGATTACGATGGCATTGGCAGCCGTGGTACAGAAAGTGGCTTTGG  
CAAATTTGAACGTGGTGGAAACAGTCGCTGGTGTGACAAATCAGATGAAGATGATTGGTCAAACCACTC  
CCACCAAGTGAACGCTTGAACAGGAATCTTTCTGGAGGCAACACTGGGATTAATTTTGAAGAAATACG  
ATGACATTCAGTTGAGGCAACAGGCAACAACCTGTCTCCACATATTGAAAGTTTCAGTGATGTTGAGAT  
GGGAGAAATTATCATGGGAAACATTGAGCTTACTCGTTATACTCGCCAACTCCAGTGCAAAAGCATGCT  
ATTCCTATTATCAAAGAGAAAAGAGACTTGATGGCTTGTGCCAAACAGGGTCTGGAAAACTGCAGCAT  
TTCTGTTGCCATCTTGAGTCAGATTTATTCAGATGGTCCAGGCGAGGCTTTGAGGGCCATGAAGAAAA  
TGGAAAGTATGGGCGCCGAAACAATACCAATCTCCTTGGTATTAGCACCAACGAGAGATTGGCAGTA  
CAGATCTACGAGGAAGCCAGAAAATTTTCATACCGATCTAGAGTTCGTCCTTGCCTGTTTATGGTGGT  
CCGATATTGGTCAGCAGATTCGAGACTTGAACGTGGATGCCATTTGTTAGTAGCCACTCCAGGACGCT  
AGTGGATATGATGGAAAGAGGAAAGATTGGATTAGACTTTTCAAATACTGGTGTAGATGAAGCTGAT  
CGGATGTTGGATATGGGTTTGGCCTCAGATTCGTAAGTGAACAAGATACTATGCCTCAAAGG  
GTGTCCGCCACACTATGATGTTTGTGCTACTTTTCTAAGGAAATACAGATGCTGGCTCGTGATTTCTT  
AGATGAATATATCTTCTTGGCTGTAGGAAGAGTTGGCTCTACCTCTGAAAACATCACACAGAAAGTAGTT  
TGGGTGGAAGAATCAGACAAACGGTCATTTCTGCTTGACCTCTAAATGCAACAGGCAAGGATTCAGTGA  
CCTTAGTGTGTTGGAGACCAAAAAGGGTGCAGATTCTCTGGAGGATTTCTTATACCATGAAGGATACGC  
ATGTACCAGCATCCATGGAGACCGTTCTCAGAGGGATAGAGAAGAGGCCCTTCACCAGTTCGCTCAGGA  
AAAAGCCCAATTTTGTGGCTACAGCAGTAGCAGCAAGAGGACTGGACATTTCAAATGTGAAACATGTTA  
TCAATTTGACTTGCCAAGTGATATTGAAGAATATGTACATCGTATTGGTCGTACGGGACGTGTAGGAAA  
CCTTGGCCTGGCAACCTCATTCTTAAACGAGAGGAACATAAATATTACTAAGGATTTGTTGGATCTTCTT  
GTTGAAGCTAAACAAGAAGTGCCGCTTGGTTAGAAAACATGGCTTATGAACACCACTACAAGGGTAGCA  
GTCGTGGACGTTCTAAGAGTAGCAGATTTAGTGGAGGGTTTGGTCCAGAGACTACCGACAAAGTAGCGG  
TGCCAGCAGTTCAGCTTCAAGCAGCAGCCGCGCAAGCAGCAGCCGAGTGGCGGAGGTGGCCACGGTAGC  
AGCAGAGGATTTGGTGGAGGTGGCTATGGAGGCTTTTACAACAGTGATGGATATGGAGGAAATTATAACT  
CCCAGGGGTTGACTGTTGGGTAAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC204171 protein sequence  
 Red=Cloning site Green=Tags(s)

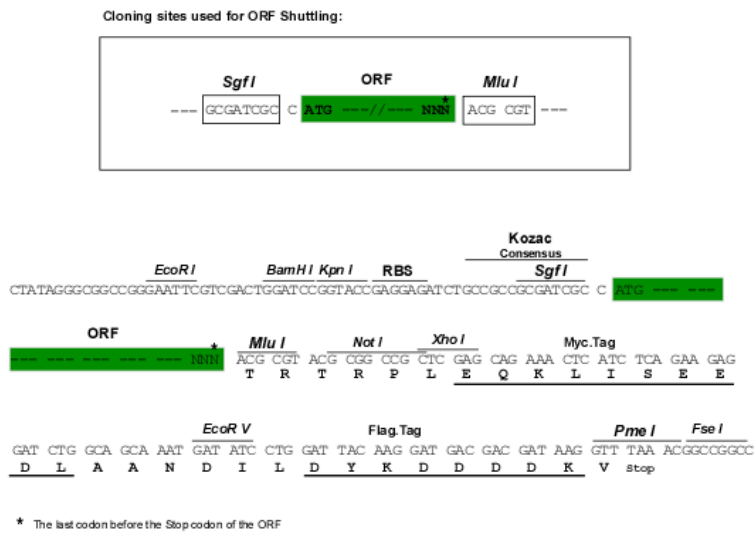
MSHVAVENALGLDQQFAGLDLNSSDNQSGGSTASKGRYIPPHLRNREATKGFYDKDSSGWSSSKDKDAYS  
 SFGSRSDSRGKSSFFSDRGSGSRGRFDDRGRSDYDGI GSRGDRSGFGKFERGGNSRWCDKSDDEDDWSKPL  
 PPSERLEQELFSGGNTGINFEKYDDIPVEATGNPCPHIESFSDVEMGEIIMGNIELTRYTRPTPVQKHA  
 IPIIIEKRDLMACAQTGSGKTA AFLLPILSQIYSDGPGREALRAMKENG RYGRKQYPI SLVLAPTRELAV  
 QIYEEARKFSYRSRVRPCVYGGADIGQQIRD LER GCHLLVATPGRLVDMMERGKIGLDFCKYLVLDEAD  
 RMLDMGFEPQIRRIVEQDTMPPKGVRHTMMFSATFPKEIQMLARDFLDEYIFLAVGRVGSTENITQKVV  
 WVEESDKRSFLDLLLNATGKDSLTLVFVETKKGADSLDFLYHEGYACTSIHGDRSQRDREEALHQFRSG  
 KSPILVATAVAARGLDISNVKHVINFDLPSDIEEYVHRIGRTGRVGNLGLATSFNERNINITKDLLDLL  
 VEAKQEVPSWLENMAYEHYKGSRSRGRSKSRFSGGF GARDYRQSSGASSSSFSSSRASSRSRGGGGHGS  
 SRGFGGGGYGGFYNSDGYGGNYNSQGV DWWGN

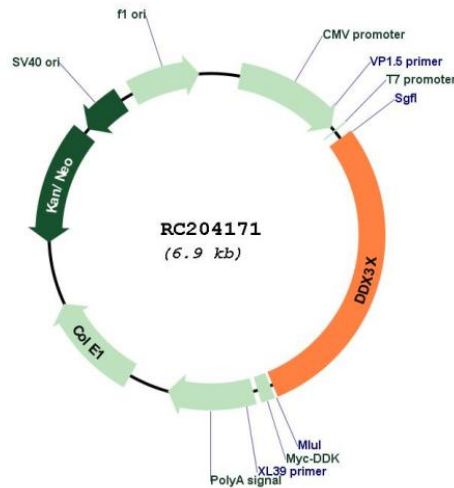
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mk6231\\_b11.zip](https://cdn.origene.com/chromatograms/mk6231_b11.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:



**Plasmid Map:**


**ACCN:** NM\_001356

**ORF Size:** 1986 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\\_001356.5](#)

**RefSeq Size:** 5433 bp

**RefSeq ORF:** 1989 bp

**Locus ID:** 1654

**UniProt ID:** [O00571](#)

**Cytogenetics:** Xp11.4

**Domains:** DEAD, helicase\_C

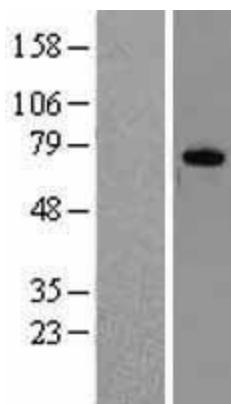
**Protein Families:** ES Cell Differentiation/IPS

**Protein Pathways:** RIG-I-like receptor signaling pathway

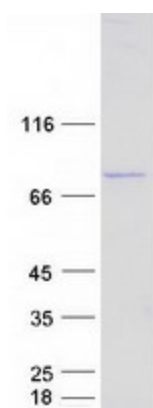
**MW:** 73.2 kDa

**Gene Summary:** The protein encoded by this gene is a member of the large DEAD-box protein family, that is defined by the presence of the conserved Asp-Glu-Ala-Asp (DEAD) motif, and has ATP-dependent RNA helicase activity. This protein has been reported to display a high level of RNA-independent ATPase activity, and unlike most DEAD-box helicases, the ATPase activity is thought to be stimulated by both RNA and DNA. This protein has multiple conserved domains and is thought to play roles in both the nucleus and cytoplasm. Nuclear roles include transcriptional regulation, mRNP assembly, pre-mRNA splicing, and mRNA export. In the cytoplasm, this protein is thought to be involved in translation, cellular signaling, and viral replication. Misregulation of this gene has been implicated in tumorigenesis. This gene has a paralog located in the nonrecombining region of the Y chromosome. Pseudogenes sharing similarity to both this gene and the DDX3Y paralog are found on chromosome 4 and the X chromosome. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Oct 2014]

## Product images:



Western blot validation of overexpression lysate (Cat# [LY419970]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204171 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified DDX3X protein (Cat# [TP304171]). The protein was produced from HEK293T cells transfected with DDX3X cDNA clone (Cat# RC204171) using MegaTran 2.0 (Cat# [TT210002]).