

## Product datasheet for **MC222665**

### **Ddx58 (NM\_172689) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ddx58 (NM_172689) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ddx58
Synonyms:	6430573D20Rik; C330021E21; RIG-I; RLR-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:**

>MC222665 representing NM\_172689  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGACAGCGGAGCAGCGGCAGAATCTGCAAGCATTAGAGACTATATCAAGAAGATTCTGGACCCACCT  
 ACATCCTCAGCTACATGAGTTCCCTGGCTCGAGGATGAGGAGGTGACGTACATTCAGGCTGAGAAGAACA  
 CAAGGGCCAATGGAAGCTGCCTCACTTCTCTCCAGTACCTGTTGAAGCTGCAGTCAGAGGGCTGGTTC  
 CAGGCCTTTTGGATGCCTGTACCATGCAGGTTACTGTGGACTTTGTGAAGCCATCGAAAGTTGGGACT  
 TTCAAAAAATTGAAAAGTTAGAGGAACACAGATTACTTTTAAGACGTTTGAAGCCAGAAATTAAGCCAC  
 AGTTGATCCAATGATATCCTTCTGAACTATCCGAATGTTTGATTAATCAGGAATGTGAAGAAATCAGA  
 CAGATCCGAGACTAAAGGGAGAATGGCAGGTGCGGAGAAGATGGCCGAATGTCTTATCAGATCCGACA  
 AGGAAAAGTGGCCAAAGTCTTGCAACTTGCTTTGGGAAAAGACAACAGCAAGTTTGTGAATTGGAT  
 TGGTGTAAAGGTTTCAAAGGGCTGAAAGCAAGGCTGATGAGGATGATGGAGCGGAGGCGTCCAGCATC  
 CAGATTTTCATTAGGAAGAGCCAGAGTGTGCAATCTCAGTCAGAAATCCCGGGCCTCCTCAGAAGCGT  
 CTCTAATAATTTACACAGCCATTGAAACCAAGAAATACCAACTGGAGCTTGCCCTGCCTGCCAAGAA  
 AGGGAAAAATACAATAATATGTGCCCTACTGGTTGTGGAAAAACCTTTGTGCGCTTCTTATATGTGAA  
 CACCATCTTAAAAATCCCATGTGGACAAAAAGGAAAGTGGTCTTCTCGCTAACCAATTCCTGTCT  
 ATGAGCAGCAGGCAACTGTGTTCTCAGATATTTTGAAGACTTGGGTACAACATTGCGAGCATTCTGG  
 GGCAACATCTGATAGCGTCTCAGTGCAGCACATCATTGAAGACAATGATATCATCATCTGACACCCAG  
 ATCTTTGTGAACAATCTCAACAACGGAGCCATCCCCTCGTTGTCTGTCTCACTCTGATGATATTTGATG  
 AGTGTCAACACTAGCAAAAACCCATACAATCAGATCATGTTGAGATACCTAGACCACAAACTTGG  
 AGAGTACAGGGGACCCACTGCCTCAGTCTGGGCTGACTGCCTCCGTCGGCGTTGGAGATGCTAAGACC  
 GCGGAGGAAGCCATGCAACATATCTGAAACTCTGTGCCGCCCTGGATGCCTCCGTGATTGCCACAGTCA  
 GAGACAACGTTGCAGAAGTGAACAGGTCGTTTATAAGCCCCAGAAAATTTCCAGGAAAGTGGCATCCCG  
 GACTTCGAACACGTTTAAATGCATCATCTCAGCTGATGAAGGAGACAGAGAAGCTAGCCAAGGATGTC  
 TCCGAGGAAGTGGAAAGCTTTTCAAATTCAAAACAGAGAATTCGGCACCCAGAAATATGAACAGTGGA  
 TTGTGCGCGTCCACAAAGCGTGTCTCAGTGTTCAGATGGCAGACAAGAGGAGGAGCCGGGTCTGCAA  
 AGCGCTCTTCTGTACACATCACATTTGCGGAAATACAACGATGCACTCATCATCAGTGAGGATGCACAG  
 ATGACAGACGCTCTAAATACCTCAAAGCCTTCTCCACGATGTCGAGAAAGCAGCATTGATGAGACCG  
 AGCGAGAGCTTACTCGGAGGTTTGAAGAAAAACTAGAGGAATTAGAAAAAGTTTCCAGGGATCCAGCAA  
 TGAGAATCCTAAACTAAGAGACCTCTACTTGGTCTTACAAGAAGGTACCACTTAAAGCCAGAGACCAAG  
 ACCATTCTCTCGTGAAGACCAGAGCACTCGTGGATGCTCTGAAGAAATGGATTGAAGAAAAATCCTGCAC  
 TAAGCTTTCTAAAGCCTGGCATACTGACTGGGCGTGGCAGAAACAAACCGGCAACAGGAATGACGCTCCC  
 GGCACAGAAGTGTGTGCTGGAGGCATTAGAGCCAGCGGAGATAACAATATTCTGATTGCTACCTCGGTC  
 GCTGATGAAGGCATTGACATTGCTGAGTGAATCTCGTATTCTCTATGAGTACGTGGGCAACGTATCA  
 AGATGATCCAAACCAGAGGCCGAGGAAGAGCACGAGATAGCAAGTGTCTCTCTGACCAGCAGCGCTGA  
 CGTGATTGAAAAAGAAAAGGCGAACATGATCAAGGAAAAAATAATGAATGAATCCATCTTAAGACTGCAG  
 ACATGGGATGAAATGAAATTTGGAAAGACGGTTCACCGCATACAGGTGAATGAAAAACTCCTCAGAGACA  
 GTCAGCACAAACCACAACCTGTTCTGACAAAAGAAAACAAGAACTGCTGTGTGGAAGTGAAGAATTT  
 TGCGTGTACACAGCTGACATTCGAGTGGTTGAGACGTCCCACTACACTGTCTTGGAGACGCTTTTAAAG  
 GAGCGCTTTGTGTGAAGCCACACCCTAAACCAAGATCTATGACAATTTTGAAGAAAGCAAAGATAT  
 TCTGCGCCAAACAGAACTGTAGCCAGACTGGGAATTTTGTGAGATACAAGACGTTTCGAGATTCCAGT  
 CATAAAAATTTGAAAGTTTCTGCTGGAAGATATTGTGAGCGGAGTTCAGAACCGGCACTCAAAGTGAAG  
 GACTTTCATTTTGAAGGATACAGTTCGATCCTGCAGAAATGTCCGT**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:**

Sgfl-Mlul

ACCN:	NM_172689
Insert Size:	2781 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
RefSeq:	<u><a href="#">NM_172689.3</a></u> , <u><a href="#">NP_766277.3</a></u>
RefSeq Size:	4943 bp
RefSeq ORF:	2781 bp
Locus ID:	230073
UniProt ID:	<u><a href="#">Q6Q899</a></u>
Cytogenetics:	4 A5

**Gene Summary:**

Innate immune receptor which acts as a cytoplasmic sensor of viral nucleic acids and plays a major role in sensing viral infection and in the activation of a cascade of antiviral responses including the induction of type I interferons and proinflammatory cytokines. Its ligands include: 5'-triphosphorylated ssRNA and dsRNA and short dsRNA (<1 kb in length). In addition to the 5'-triphosphate moiety, blunt-end base pairing at the 5'-end of the RNA is very essential. Overhangs at the non-triphosphorylated end of the dsRNA RNA have no major impact on its activity. A 3'overhang at the 5'triphosphate end decreases and any 5'overhang at the 5' triphosphate end abolishes its activity. Upon ligand binding it associates with mitochondria antiviral signaling protein (MAVS/IPS1) which activates the IKK-related kinases: TBK1 and IKBKE which phosphorylate interferon regulatory factors: IRF3 and IRF7 which in turn activate transcription of antiviral immunological genes, including interferons (IFNs); IFN-alpha and IFN-beta. Detects both positive and negative strand RNA viruses including members of the families Paramyxoviridae: newcastle disease virus (NDV) and Sendai virus (SeV), Rhabdoviridae: vesicular stomatitis virus (VSV), Orthomyxoviridae: influenza A and B virus, Flaviviridae: Japanese encephalitis virus (JEV), hepatitis C virus (HCV), dengue virus (DENV) and west Nile virus (WNV). It also detects rotavirus and orthoreovirus. Also involved in antiviral signaling in response to viruses containing a dsDNA genome such as Epstein-Barr virus (EBV). Detects dsRNA produced from non-self dsDNA by RNA polymerase III, such as Epstein-Barr virus-encoded RNAs (EBERs). May play important roles in granulocyte production and differentiation, bacterial phagocytosis and in the regulation of cell migration. [UniProtKB/Swiss-Prot Function]