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Product datasheet for MG226477

Ddx58 (NM_172689) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ddx58 (NM_172689) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ddx58
Synonyms:	6430573D20Rik; C330021E21; RIG-I; RLR-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG226477 representing NM_172689
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGACAGCGGAGCAGCGGCAGAATCTGCAAGCATTCAGAGACTATATCAAGAAGATTCTGGACCCCACCT
ACATCCTCAGCTACATGAGTTCCTGGCTCGAGGATGAGGAGGTGCAGTACATTCAGGCTGAGAAGAACAA
CAAGGGCCCAATGGAAGCTGCCTCACTCTTCCTCCAGTACCTGTTGAAGCTGCAGTCAGAGGGCTGGTTC
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CATAAAAATTGAAAGTTTCGTCGTGGAAGATATTGTGAGCGGAGTTCAGAACCGGCACTCAAAGTGGAAG
GACTTTCATTTTGAAAGGATACAGTTCGATCCTGCAGAAATGTCCGTA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG226477 representing NM_172689
Red=Cloning site Green=Tags(s)

MTAEQRQNLQAFRDYIKKILDPTYILSYMSSWLEDEEVQYIQAEKNNKGPMEAASLFLQYLLKLQSEGWF
QAFLDALYHAGYCGLCEAIESWDFQKIEKLEEHRLLLRRLEPEFKATVDPNDILSELSECLINQECEEIR
QIRDTKGRMAGAEKMAECLIRSDKENWPKVLQLALEKDNSKFSELWIVDKGFKRAESKADEDDGAEASSI
QIFIQEEPECQNLSQNPGPPSEASSNNLHSPLKPRNYQLELALPAKKGKNTIICAPTGCGKTFVSLLICE
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AEEAMQHICKLCAALDASVIATVRDNVAELEQVVYKPQKISRKVASRTSNTFKCIISQLMKETEKLAKDV
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ADEGIDIAECNLVILYEYVGNVIKMIQTRGRGRARDSKCFLLTSSADVIEKEKANMIKEKIMNESILRLQ
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ERFVCKPHPKPKIYDNFEKKAKIFCAKQNCSHDWGIFVRYKTFEIPVIKIESFVVEDIVSGVQNRHSKWK
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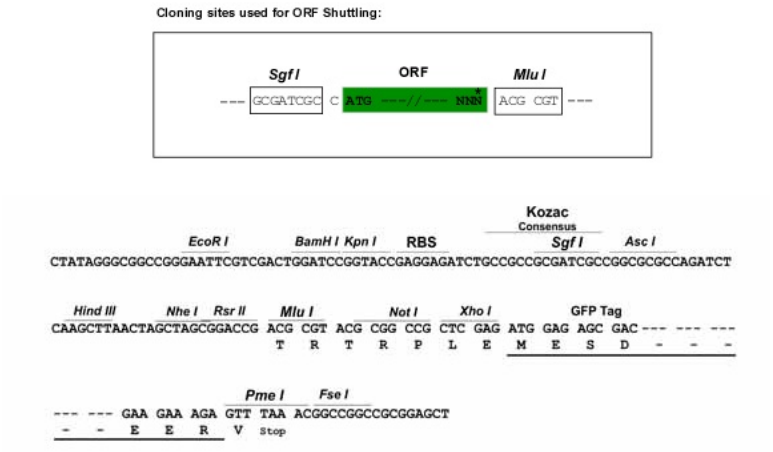
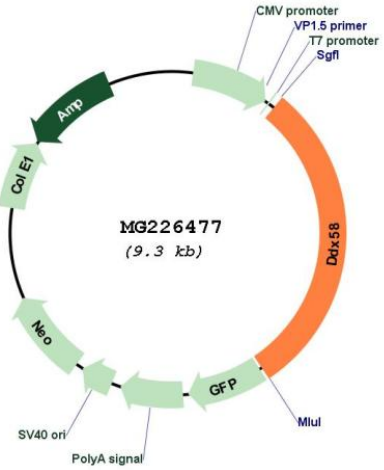
TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_172689
ORF Size:	2778 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_172689.3, NP_766277.3
RefSeq Size:	4943 bp
RefSeq ORF:	2781 bp
Locus ID:	230073
UniProt ID:	Q6Q899
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]