

Product datasheet for **MR209973**

Dhx58 (NM_030150) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dhx58 (NM_030150) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Dhx58
Synonyms:	B430001I08Rik; D11Lgp2e; Lgp2; LPG2; RLR-3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR209973 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGCTGCGACCTACCAGTGGGAAGTGATCTTACCTGCTCTGGAGGGCAAGAATATCATTATATGGC
 TGCCACGGGTGCTGGGAAGACCCGGGAGCTGCCTTTGTAGCCAAGAGGCATCTAGAGACGGTAGACAG
 AGGCAAGGTGGTGGTACTGGTCAATAGGGTACACCTGGTGGAGCCAGCACGCCGAGGAGTTCAGGCGCATG
 CTGGATAAACACTGGACCGTAACAACCCTGAGTGGGGACATGGGATCCCGAGCTGGCTTTGGCCTGATGG
 CTCGGAGCCACGACCTGCTCATCTGTACGGCAGAGTTGTTACAGTTGGCACTCAACAGCTCTGAGGAGGA
 TGAACACGTAGAGCTCAGAGAATTCTCGCTGATTGTGGTGGACGAGTGTCAACACACCCACAAGGACACC
 GTCTACAACACCATCTTGAGCCGGTACCTAGAACAAGCTGAAGAAGGCAGAGCCCTCCCCAGGTCC
 TGGGTCTCACAGCCTCCCGAGGACTGGAGGGGCCACCAAGCTCCAAGGGGCCATTGATCACATCTTACA
 GCTTTGTGCGAATTTAGATACGTGCCACATCATGTGCGCAAAGAATTGCTACTCCAGCTGCTGATGCAT
 AACCCGAAGCCCTGCAAGCAGTATGACCTCTGCCAAAGGCGCGCACAGGATCCTTTTGGGGACTTGATAA
 AAAAGCTTATGAACCAAAATCCACCAACAACCTAGAGATGCCTGACTTGAAGCAACAATTTGGAACCCAGAT
 GTATGAGCAGCAAGTGGTACAGTTGTGCAAGGATGCGGCAGAGGCTGGACTCCAGGAACAGCGGGTGTAT
 GCGCTGCATTTGCGGGCGCTACAATGATGCGCTATTTATCCACGATACTGTCCGTGCCCGGACGCCCTTG
 ACATGTTGCAAGATTTTTACGACAGAGAACGCACCACAAAAACACAGATGGTGCCTGTGAAAGCTGGCT
 GCTGAAGCTGTTGATGACCATAAAAAATGTGCTGGGCCAGCTAGCAGCTCGGGTCTGAGAACCCGAAG
 TTGGAGATGCTGGAAAGGATCTTACTGAAGCAGTTTGGGAGTCTGGCCACACTCGGGGTATCATCTTCA
 CCAGAACCCGTCAGACTGCTTCCCTCCTGCTGCTGGCTTCGGCAGCAGCCTTGCTACAGACTGTGGG
 CATCAAGCCACAGATGCTGATCGGAGCAGGGAACAACAAGCCAGAGCACACACATGACCCAGAAAGACCAG
 CAGGAAGTGATCCAGGAGTTCAGGGATGGTATCCTGAGCCTTCTAGTGGCCACAAGTGTGGCAGAGGAGG
 GGCTGGATATCGCTCAGTGCAATGTGGTGGTGCCTATGGGCTCCTGACCAATGAGATCTCCATGGTCCA
 GGCCCGGGTCTGCTCGAGCTGGTCCAGAGTGTGACTCCTTCTGGCTACAGAGGGCAGTCCGGAGATG
 AAGCGGGAGCTAACCAATGAGGCTCTGGAGGTGCTGATGGAGAAGGCTGTGGCTGCTGTACAGAAGATGG
 ACCCTGATGAGTTCAGGCCAAGATCCGGGACTTGACGCAAGCATCTCTCGTTAAGCGGGCAGCACGCGC
 GGCCCATCGGGAGATCCAGCAGGGGAGTTCCTACCGGAGCACGTGCAACTTCTCTGCATCAACTGTATG
 GTGGCCGTGGGCTACGGGAGTGACTGCGGAAAGTGGAGGGCACCCACCAGTCAATGTGAACCCCAACT
 TCTCGGTCTACTATACCACCTCCAGAACCCTGTGGTCATTAACAAGGTCTTTAAGGACTGGAGACCTGG
 AGGAACCATCAGGTGCAGTAACTGTGGGGAGGTCTGGGGCTTCCAGATGATCTACAAATCAGTGACCTTG
 CCAGTGCTCAAAATCGGAAGCATGCTACTGAAACACCTCGAGGGGAAGATCCAGGCCAAAAAGTGGTCCC
 GGGTGCCTTTCTCCATACCAGTCTTCGATATCCTGCAAGACTGCACACAAAGCCTGTCTGAGCTCTCCCT
 GGAC

ACGCGTACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR209973 protein sequence
Red=Cloning site Green=Tags(s)

MELRPYQWEVILPALEGKNI IWLPTGAGKTRAAAFVAKRHLETVDRGKVVVLVNRVHLVSQHAEFFRM
 LDKHWTVTLSGDMGSRAGFGLMARSHDLLICTAELLQLALNSSEDEHVELREFSLIVVDECHHHTKDT
 VYNTILSRYLEQKLKKAEP L P Q V L G L T A S P G T G G A T K L Q G A I D H I L Q L C A N L D T C H I M S P K N C Y S Q L L M H
 N P K P C K Q Y D L C Q R R A Q D P F G D L I K K L M N Q I H Q Q L E M P D L K Q Q F G T Q M Y E Q Q V V Q L C K D A A E A G L Q E Q R V Y
 A L H L R R Y N D A L F I H D T V R A R D A L D M L Q D F Y D R E R T T K T Q M V R A E S W L L K L F D D H K N V L G Q L A A R G P E N P K
 L E M L E R I L L K Q F G S P G H T R G I I F T R T R Q T A S S L L L W L R Q Q P C L Q T V G I K P Q M L I G A G N T S Q S T H M T Q K D Q
 Q E V I Q E F R D G I L S L L V A T S V A E E G L D I A Q C N V V V R Y G L L T N E I S M V Q A R G R A R A G Q S V Y S F L A T E G S R E M
 K R E L T N E A L E V L M E K A V A A V Q K M D P D E F K A K I R D L Q Q A S L V K R A A R A A H R E I Q Q G Q F L P E H V Q L L C I N C M
 V A V G Y G S D L R K V E G T H H V N V N P N F S V Y Y T T S Q N P V V I N K V F K D W R P G G T I R C S N C G E V W G F Q M I Y K S V T L
 P V L K I G S M L L E T P R G K I Q A K K W S R V P F S I P V F D I L Q D C T Q S L S E L S L D

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_030150

ORF Size: 2037 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_030150.2](#), [NP_084426.2](#)

RefSeq Size: 2427 bp

RefSeq ORF: 2037 bp

Locus ID: 80861

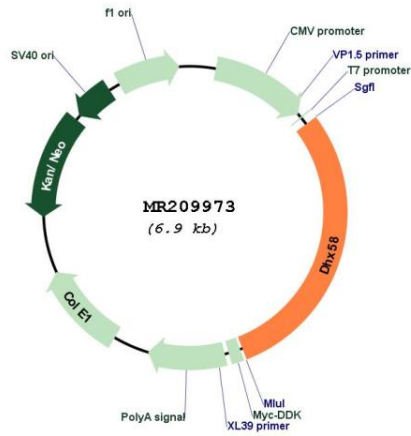
UniProt ID: [Q99J87](#)

Cytogenetics: 11 63.52 cM

MW: 76.7 kDa

Gene Summary: Acts as a regulator of DDX58/RIG-I and IFIH1/MDA5 mediated antiviral signaling. Cannot initiate antiviral signaling as it lacks the CARD domain required for activating MAVS/IPS1-dependent signaling events. Can have both negative and positive regulatory functions related to DDX58/RIG-I and IFIH1/MDA5 signaling and this role in regulating signaling may be complex and could probably depend on characteristics of the infecting virus or target cells, or both. Its inhibitory action on DDX58/RIG-I signaling may involve the following mechanisms: competition with DDX58/RIG-I for binding to the viral RNA, binding to DDX58/RIG-I and inhibiting its dimerization and interaction with MAVS/IPS1, competing with IKBKE in its binding to MAVS/IPS1 thereby inhibiting activation of interferon regulatory factor 3 (IRF3). Its positive regulatory role may involve unwinding or stripping nucleoproteins of viral RNA thereby facilitating their recognition by DDX58/RIG-I and IFIH1/MDA5. Involved in the innate immune response to various RNA viruses and some DNA viruses such as poxviruses, and also to the bacterial pathogen *Listeria monocytogenes*. Can bind both ssRNA and dsRNA, with a higher affinity for dsRNA. Shows a preference to 5'-triphosphorylated RNA, although it can recognize RNA lacking a 5'-triphosphate.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR209973