

Product datasheet for **MG210392**

Ddx1 (NM_134040) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ddx1 (NM_134040) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ddx1
Synonyms:	AA409185; DBP-RB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG210392 representing NM_134040
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGCCTTCTCCGAAATGGGTGTTATGCCGAGATTGCACAAGCTGTGGAGGAGATGGATTGGCTTC
 TACCAACTGATATCCAGGCAGAATCTATCCATTGATCCTAGGAGGAGGGATGTAATCATGGCTGCAGA
 AACAGGAAGTGGAAAACTGGTGCATTTAGTATCCCGTTATCCAGATAGTGTATGAAACTCTGAAAGAC
 CAACAGGAAGGAAAGAAAGGAAAACTATTAATAAACTGGTGCCTCAGTGTCAACAAGTGGCAGATGA
 ACCCATATGATAGAGGTCTGCTTTTGAATTGGATCAGATGGTCTGTGTGTCAGAGCAGAGAAGTGAA
 GGAGTGGCATGGATGCAGAGGAAGTACAGGACTGCTGAAAGGGAAGCACTACTATGAGGTGCTGTGCAT
 GACCAAGGGCTATGCAGAGTTGGTGGTCTACCATGCAGGCTTCCTTAGACCTAGGTACTGACAAGTTG
 GATTTGGCTTCGGTGGACAGGAAAGAAATCTCATAATAAACAATTTGATAATTATGGAGAGGAATTCAC
 TATGCATGATACCATTGGATGTTACTTAGATATCGATAAAGGGCATGTGAAGTTCTTAAGAATGGAAAA
 GATCTTGGTCTGGCATTGAAATACCAGCACATATAAAAAACCAAGCCCTCTCCCTGCCTGTGTTTGA
 AGAATGCTGAATTTAACTTTGGTGAAGAAGAATTTAAGTTTCCACAAAAGATGGTTTTGTTGC
 TCTTCCAAAGGCCCAGATAATTACATCGTCAAATCTCAGCACACAGGTAATGCACAGGTGCACAAAACA
 AAATTTCTCCGAATGCTCCAAAAGCTCTCATTGTGGAACCTCCAGAGAGTTAGCTGAGCAAACCTTGA
 ACAACGTCAAGCAGTTAAGAAGTATATTGATAATCCTAAATTGCGGGAGCTTCTCATAATTGGTGGCGT
 TGCGGCTCGGGATCAGCTCTCTGTTCTGGATAATGGGGTTGACATTGTTGTCGGTACTCCAGGAAGATTG
 GATGATTTGGTGTGACTGGAAAGCTCACTTGTCTCAAGTTAGATTCTGGTCTGGATGAAGCAGATG
 GCTTCTCTCAAGGCTACTCTGACTTCAATTAACCGGATGCACAACAGATTCCGCAGATTACGTGATG
 TGGGAAAAGACTTCAGGTGATTGTTGCTCTGCTACTCTGCATTCTTTTGTATGTAAGAAGCTATCGGAG
 AAGATAATGCATTTTCCACATGGTTCGATTTGAAAGGAGAAGATTCTGTTCCAGATACTGTGCATCATG
 TCGTTGCTCCTGTGAACCCAAAAGTGAAGCTTTGGGAAAGGCTGGGGAAGAACCACATTGAACTGA
 TGATGTACACGCAAAGGATAACACAAGACCTGGTCTAACAGTCCAGAGATGTGGTCTGAAGCTATTA
 AACTGAAGGGGAGTATGCTGTCCGAGCAATCAAGGAACACAAGATGGATCAAGCAATTATCTTCTGTA
 GAACTAAAATTGACTGTGATAAATTGGAGCAGTACTTTATGCAGCAAGGAGGAGGACCTGACAAAAAAGG
 ACACCAGTTCTCATGTGTATGTCTTCATGGTGACAGAAAGCCTCATGAGAGAAAGCAAAACTTGGAAACGA
 TTTAAGAAAGGAGACGTAAGATTCTTGATTTGCACAGATGTAGCTGCTAGAGGGATTGATATCCATGGCG
 TTCCTTATGTGATCAACGTCACCCTGCCTGATGAGAAGCAGAATTATGTGCACCGGATCGGCAGAGTGGG
 ACGAGCTGAAAGGATGGGCTGGCTATTTCCCTGGTGGCAACCGAGAAAGAAAAGGTTTGGTATCATGTA
 TGTAGCAACCGTGGGAAGGGATGCTATAACACTAGACTCAAGGAAGATGGCGGCTGACTATCTGGTACA
 ATGAAATGCAGCTACTTCCGAGATAGAAGAGCACCTGAACTGCACCATTTCCAGGTGCGAGCCAGATAT
 AAAGTTCCAGTGGATGAGTTTGTATGGGAAAGTACATACGGTCAAAAAAGGGCTGCTGGCGGTGGAAAC
 TACAAAGGCCATGTGGATGTCTGGCACCTACCGTTCAAGAGTTGGCTGCCCTTAAAAGGAAGCACAGA
 CCTCTTTCCTACACCTTGGCTACCTTCCAACCAAGCTGTTCCGAACCTTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG210392 representing NM_134040
 Red=Cloning site Green=Tags(s)

MAAFSEMGMPEIAQAVEEMDWLLPTDIAESIPLILGGGDVLMMAETGSGKTGAFSIPVIQIVYETLKD
 QQEGKKGKTTIKTGASVLNKWQMNPPYDRGSAFAIGSDGLCCQSREVKKEWHGCRGTRGLLKGKHYYEVSCH
 DQGLCRVWSTMQASLDLGTDFGFGGGTGKSHNKQFDNYGEEFTMHDITIGCYLDIDKGHVKFSKNGK
 DLGLAFEIPAHIKNQALFPACVLKNAELKFNFGEEEFKFPKDGFFVALSKAPDNYIVKSQHTGNAQVSQT
 KFLPNAPKALIVEPSRELAEQTLNNVKQFKKYIDNPKLRELLIIGGVAARDQLSVLDNGVDIVVGTGRL
 DDLVSTGKLNLSQVRFLVLDEADGLLSQGYSDFINRMHNQIPQITCDGKRLQVIVCSATLHSDVKKLSE
 KIMHFPTWVDLKGEDSVPTVHHVVVVPNPKTDKLERLWLNHIRTDDVHAKDNTRPGANSPEMWEAIAIK
 ILKGEYAVRAIKEHKMDQAIIFCRTKIDCNLEQYFMQQGGGPKKGHQFSCVCLHGDRKPHERKQNLER
 FKKGDVRFLLICTDVAARGIDIHGVPIVINVTLPEKQNYVHRIGRVGRAERMGLAISLVATEKEKVYHV
 CSNRGKGCYNTRLKEDGGCTIWNEMQLLSEIEEHLNCTISQVEPDIKVPVDEFDGVKVTYQKRAAGGN
 YKGVHVDLAPTVQELAALKEAQTSLHLGYLPNQLFRFT

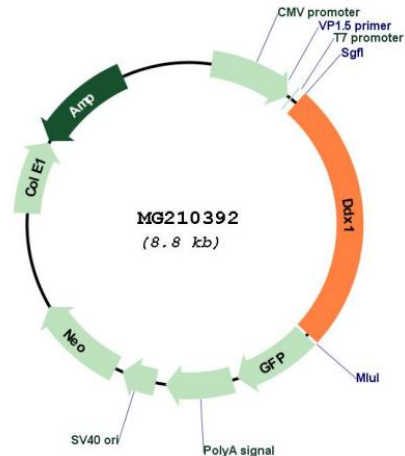
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:


ACCN: NM_134040

ORF Size: 2220 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_134040.1](#), [NP_598801.1](#)

RefSeq Size: 2488 bp

RefSeq ORF: 2223 bp

Locus ID: 104721

UniProt ID: [Q91VR5](#)

Cytogenetics: 12 A1.1

Gene Summary: Acts as an ATP-dependent RNA helicase, able to unwind both RNA-RNA and RNA-DNA duplexes. Possesses 5' single-stranded RNA overhang nuclease activity. Possesses ATPase activity on various RNA, but not DNA polynucleotides. May play a role in RNA clearance at DNA double-strand breaks (DSBs), thereby facilitating the template-guided repair of transcriptionally active regions of the genome. Together with RELA, acts as a coactivator to enhance NF-kappa-B-mediated transcriptional activation (By similarity). Acts as a positive transcriptional regulator of cyclin CCND2 expression (PubMed:19398953). Binds to the cyclin CCND2 promoter region (PubMed:19398953). Associates with chromatin at the NF-kappa-B promoter region via association with RELA. Binds to poly(A) RNA. May be involved in 3'-end cleavage and polyadenylation of pre-mRNAs. Component of the tRNA-splicing ligase complex required to facilitate the enzymatic turnover of catalytic subunit RTCB: together with archease (ZBTB8OS), acts by facilitating the guanylation of RTCB, a key intermediate step in tRNA ligation (By similarity). Component of a multi-helicase-TICAM1 complex that acts as a cytoplasmic sensor of viral double-stranded RNA (dsRNA) and plays a role in the activation of a cascade of antiviral responses including the induction of proinflammatory cytokines via the adapter molecule TICAM1 (PubMed:21703541). Specifically binds (via helicase ATP-binding domain) on both short and long poly(I:C) dsRNA (PubMed:21703541).[UniProtKB/Swiss-Prot Function]