

Product datasheet for **MG216290**

Dtl (NM_029766) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dtl (NM_029766) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Dtl
Synonyms:	2810047L02Rik; 5730564G15Rik; L2dtl; Ramp
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide
Sequence:

>MG216290 representing NM_029766
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGCTCTTCAACTCGGTACTCCGCCAGCCGAGCTCGGCGTCTGAGAACGGTGGTCTTCACATTACC
 CTCTACAATCCCTTCTAAGTGGTTATCAGTGCAACTGTAAACGATGAACACACGTCTTATGGAGAAACAGG
 AGTCCCAGTTCCTCCTTTTGGATGCACCTTCTGTACCGCTCCAGTATGGAGCATATATTAGCAGTTGCT
 AATGAAGAAGGCTTTGTGAGATTATATAATACAGAATCACAACTAGCAAAAAGACATGCTTCAAGGAGT
 GGATGGCTCACTGGAATGCTGTCTTTGACTTGGCCTGGTCCCTGGTGAACCTTAACTTGTACAGCAGC
 CGGTGATCAGACAGCCAAATTTGGGATGTAAGAGCTGGTGAAGCTGATGGGGACATGCAAAGGCCACCAG
 TGCAGCCTCAAGTCTGTAGCCTTCCCAAGTTTCAAAAAGCTGTGTTCTCTACAGGGGGAGAGACGGCA
 ACATTATGATCTGGGACACCAGGTGTAACAAAAAGATGGATTTTATAGACAAGTGAATCAAATCAGTGG
 AGCTCACAACTGCAGACAAGCAAACCCCTTCAAAGCCCAAGAAGAAAACAAAATCAAAGGACTTGTCT
 CCTGCTGTGGATCCCAGCAGAGTGTACTGTGGTCTCTTTTCCAGGATGAGAATACATTAGTCTCAGCAG
 GAGCCGTGGATGGAATAATCAAAGTATGGGATTTGCGCAAGAATTACACTGCTTATCGACAAGAACCAT
 AGCATCCAAGTCTTCTGTACCCAGGTACCAGCACTCGAAAGCTAGGATACTCGAGTTTGGTTTTAGAC
 TCTACTGGCTCTACTTTATTTGCTAACTGCACAGATGACAACATCTATATGTTCAATATGACTGGCTTAA
 AGACTTCTCCGGTGGCTGTCTTCAATGGACACCAGAAGTCTACCTTTTATGTAATAATCAAGTCTTAGTCC
 AGATGACCAGTTTTTAAATCAGTGGTCAAGTGTGAAGCTGCCTACATTTGGAAGTTTCCATGCCATGG
 CATCCTCTACTGTGCTCCTGGGTCACTTCAAGAGTCAAGTGTGCTGTGCTGGTGTCCATCAGACTTCA
 CCAAGATTGCAACCTGCTGATGATAATACACTGAAAATCTGGCGCTTGAATAGAGGCCTAGAGGAGAA
 ACCAGGTGATAAACATCCATAGTGGTTGGACCTCTCAGAAGAAAAAAGAAGTGAAGCCTGCCAGTA
 ACGGTACCAAGTAGCCAGAGTACTCCTGCCAAAGCTCCCAGAGCCAAGAGCAGTCCATCCATCTCCTCTC
 CTTCTGTCAGCAGTTGTACTCCGAGCTGTGCAGGAGACCTCCCTCTTCTTCAAGTACCCCCACATTCTC
 AGTCAAAACCACTCCTGCCACGACCCGTTCTTCCAGTCAAGAGAGGCTCCATCTTCTGTGTCTCCC
 AAGCCACTCTCATCTTCAAGATGTCGCTTAGAAAAGTGGTGGACCCGAACACCTTCTCATCACCACCTG
 TCACTCCACCTGCTTCTGAGACAAAGATCTCATCTCAAGAAAAGCTCTTATTCTGTGAGCCAGAAGTC
 ATCACAGGCAGATGCTTGTCTGAATCTAGAAAATAGAGTGAAGAGGCGTCTTGAAGTCAAGTGTCTGGAG
 AGTGTGAAACAAAAGTGTGTAAGAGTTGCAACTGTGTCAGTGTGACTGAGCTTACCGCCAAGCGGAGAGTCTTC
 GTTTGGATCTGTGCTGCCTTCCGGCACCCAGGAAGTCCCTTAGCCAAGACTCCGAGGGTCTTACCAATC
 AAGCAAGACTGAAGGTGCTGGCACAAGCATCTCAGAACCCTCTTCTCTGTGAGTCTTATGCTTCTGAA
 GGCTGTGGACCACTGCCTCTTCTTTGAGACCTTGTGGAGAAGGATCTGAGATGGTGGGCAAGAGAATA
 GCTCTCCAGAGAAATAAGAACTGGTTGTTGGCCATAGCAGCCAAACGCAAGGCAGAAAAATTCATCCCCAAG
 AAGTCCATCATCTCAGACACCCAGTCCAGGAGACAAAGTGGGAAGACGTCACCAGGCCCGGTACCATT
 ACTCCAGCTCCATGAGGAAGATATGTACATACTTTCGTAGAAAAGACTCAAGATGACTTCTGCAGTCTGT
 AACACTCAACTGAATTA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG216290 representing NM_029766
 Red=Cloning site Green=Tags(s)

MLFNSVLRQPQLGVLNRNGWSSHYPQLSLLSGYQCNCNDEHTSYGETGVPVPPFGCTFCTAPSMEHILAVA
 NEEGFVRLYNTESTKTKCFKEWMAHWNVFDLAWVPGELKLVTAAGDQTAKFWDVRAGELMGTKCGHQ
 CSLKSVAFPKFKAVFSTGGRDGNIMIWDTRCNKKDGFYRQVNQISGAHNTADKQTPSKPKKKQNSKGLA
 PAVDSQQSVTVVLFQDENTLVSAGAVDGIKVVWDLRKNYTAIRQEPIASKSFLYPGTSTRKLGYSLLVLD
 STGSTLFLANCTDDNIYMFNMTGLKTSPPVAVFNHQNSTFYVKSSLSPDDQFLISGSSDEAAYIWKVMPW
 HPPTVLLGHSQEVTVCWCPSDFTKIATCSDDNTLKIWRLNRGLEEKPGDKHSIVGWTSQKKKEVKACPV
 TVPSSQSTPAKAPRAKSSPSSISSPSSAACTPSCAGDLPLPSSSTPTFSVKTTTPATRRSSVSRRGSISSVSP
 KPLSSFKMSLRNWVTRTPSSSPPVTPPASETKISSPRKALIPVSQKSSQADACSESRNRVRRRLDSSCLE
 SVKQKCVKSCNCVTELDGQAESLRLLDCLSGTQEVLSQDSEGPTKSSKTEGAGTISEPPSPVSPYASE
 GCGPLPLRPCGEGSEMVGKENS SPENKNWLLAIAAKRKAENSSPRSPSQTPSSRRQSGKTPGPVTI
 TPSSMRKICTYFRRKTQDDFCSPHESTEL

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_029766

ORF Size: 2187 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_029766.3](#), [NP_084042.1](#)

RefSeq Size: 4202 bp

RefSeq ORF: 2190 bp

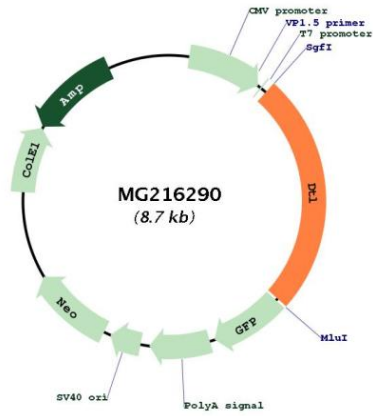
Locus ID: 76843

UniProt ID: [Q3TLR7](#)

Cytogenetics: 1 H6

Gene Summary: Substrate-specific adapter of a DCX (DDB1-CUL4-X-box) E3 ubiquitin-protein ligase complex required for cell cycle control, DNA damage response and translesion DNA synthesis. The DCX(DTL) complex, also named CRL4(CDT2) complex, mediates the polyubiquitination and subsequent degradation of CDT1, CDKN1A/p21(CIP1), FBH1, KMT5A and SDE2. CDT1 degradation in response to DNA damage is necessary to ensure proper cell cycle regulation of DNA replication. CDKN1A/p21(CIP1) degradation during S phase or following UV irradiation is essential to control replication licensing. KMT5A degradation is also important for a proper regulation of mechanisms such as TGF-beta signaling, cell cycle progression, DNA repair and cell migration. Most substrates require their interaction with PCNA for their polyubiquitination: substrates interact with PCNA via their PIP-box, and those containing the 'K+4' motif in the PIP box, recruit the DCX(DTL) complex, leading to their degradation. In undamaged proliferating cells, the DCX(DTL) complex also promotes the 'Lys-164' monoubiquitination of PCNA, thereby being involved in PCNA-dependent translesion DNA synthesis. The DDB1-CUL4A-DTL E3 ligase complex regulates the circadian clock function by mediating the ubiquitination and degradation of CRY1 (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG216290