

Product datasheet for **SC337207**

CDT2 (DTL) (NM_001286230) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CDT2 (DTL) (NM_001286230) Human Untagged Clone
Tag:	Tag Free
Symbol:	CDT2
Synonyms:	CDT2; DCAF2; L2DTL; RAMP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_001286230, the custom clone sequence may differ by one or more nucleotides

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ATGCTCTTCAATTCGGTGCTCCGCCAGCCCCAGCTTGGCGTCCTGAGAAATGCTCCCAATATGGAACATG
TACTAGCAGTTGCCAATGAAGAAGGCTTTGTTTCGATTGTATAACACAGAATCACAAAGTTTCAGAAAGAA
GTGCTTCAAAGAATGGATGGCTCACTGGAATGCCGTCTTTGACCTGGCCTGGGTTCTGGTGAACCTTAAA
CTTGTTACAGCAGCAGGTGATCAAAACAGCCAAATTTTGGGACGTAAAAGCTGGTGAGCTGATTGGAACAT
GCAAAGGTCATCAATGCAGCCTCAAGTCAGTTGCCTTTTCTAAGTTTGAGAAAGCTGTATTCTGTACGGG
TGGAAGAGATGGCAACATTATGGTCTGGGATACCAGGTGCAACAAAAAGATGGGTTTTATAGGCAAGTG
AATCAAATCAGTGGAGCTCACAATACCTCAGACAAGCAAAACCCCTTCAAAACCAAGAAGAAACAGAATT
CAAAAGGACTTGCTCCTTCTGTGGATTTCCAGCAAAGTGTACTGTGGTCCTCTTCAAGACGAGAATAC
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CGACAAGAACCCATAGCATCCAAGTCTTTCCTGTACCCAGGTAGCAGCACTCGAAAACCTGGATATTCAA
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TATGACTGGGTTGAAGACTTCTCCAGTGCTATTTTCAATGGACACCAGAACTCTACCTTTTATGTAAAA
TCCAGCCTTAGTCCAGATGACCAGTTTTTGTAGTCAGTGGCTCAAGTGATGAAGCTGCCTACATATGGAAGG
TCTCCACACCCTGGCAACCTCCTACTGTGCTCCTGGGTCAATTCTCAAGAGGTACGTCGTGTGCTGGTG
TCCATCTGACTTCACAAAGATTGCTACCTGTTCTGATGACAATACACTAAAAATCTGGCGCTTGAATAGA
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CAAGACCTGGCCTAGTAACAGTAACGAGTAGCCAGAGTACTCTGCCAAAGCCCCAGGGTAAAGTGCAA
TCCATCCAATTCTTCCCGTCATCCGCAGCTTGTGCCCAAGCTGTGCTGGAGACCTCCCTCTTCCCTTCA
AATACTCTACGTTCTCTATTAACCTCTCCTGCCAAGGCCCGTCTCCATCAACAGAAGAGGCTCTG
TCTCCTCCGTCTCTCCCAAGCCACCTTCATCTTTCAAGATGTCGATTAGAACTGGGTGACCCGAACACC
TTCCTCATCACCACCATCACTCCACCTGCTTCGGAGACCAAGATCATGTCTCCGAGAAAAGCCCTTATT
CCTGTGAGCCAGAAGTCATCCCAAGCAGAGGCTTGCTCTGAGTCTAGAAATAGAGTAAAGAGGAGGCTAG
ACTCAAGCTGTCTGGAGAGTGTGAACAAAAGTGTGTGAAGAGTTGTAAGTGTGTGACTGAGCTTGATGG
CCAAGTTGAAAATCTTCATTTGGATCTGTGCTGCCTTGCTGGTAACCAGGAAGACCTTAGTAAGGACTCT
CTAGGTCTACCAATCAAGCAAAATTGAAGGAGCTGGTACCAGTATCTCAGAGCCTCCGTCTCTATCA
GTCCGTATGCTTCAGAAAGCTGTGGAACGCTACCTCTTCTTTGAGACCTTGTTGAGAAGGGTCTGAAAT
GGTAGGCAAGAGAATAGTTCCCAAGAGAATAAAACTGGTTGTTGGCCATGGCAGCCAAACGGAAGGCT
GAGAATCCATCTCCACGAAGTCCGTATCCAGACACCAATTCCAGGAGACAGAGCGGAAAGACATTGC
CAAGCCCGGTCAACATCACGCCAGCTCCATGAGGAAAATCTGCACATACTTCCATAGAAAGTCCCAGGA
GGACTTCTGTGGTCTGAACACTCAACAGAATTAG
  
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Restriction Sites: Sgfl-MluI

ACCN: NM_001286230

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:	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:	<u>NM_001286230.1, NP_001273159.1</u>
RefSeq Size:	4485 bp
RefSeq ORF:	2067 bp
Locus ID:	51514
Cytogenetics:	1q32.3
Protein Families:	Druggable Genome
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 (PubMed:16861906, PubMed:16949367, PubMed:16964240, PubMed:17085480, PubMed:18703516, PubMed:18794347, PubMed:18794348, PubMed:19332548, PubMed:20129063, PubMed:23478441, PubMed:23478445, PubMed:23677613, PubMed:27906959). CDT1 degradation in response to DNA damage is necessary to ensure proper cell cycle regulation of DNA replication (PubMed:16861906, PubMed:16949367, PubMed:17085480). CDKN1A/p21(CIP1) degradation during S phase or following UV irradiation is essential to control replication licensing (PubMed:18794348, PubMed:19332548). KMT5A degradation is also important for a proper regulation of mechanisms such as TGF-beta signaling, cell cycle progression, DNA repair and cell migration (PubMed:23478445). 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 (PubMed:20129063, PubMed:23478441, PubMed:23478445, PubMed:23677613). The DDB1-CUL4A-DTL E3 ligase complex regulates the circadian clock function by mediating the ubiquitination and degradation of CRY1 (PubMed:26431207).[UniProtKB/Swiss-Prot Function] Transcript Variant: This variant (3) lacks an in-frame exon in the 5' coding region compared to variant 1. The encoded isoform (3) is shorter than isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.