



Rabbit Anti-CDT2 antibody

SL7935R

Product Name:	CDT2
Chinese Name:	维甲酸调节核基质相关蛋白抗体
Alias:	Lethal(2) denticleless protein homolog; CDW1; CDW1; DCAF2; DDB1 and CUL4 associated factor 2; Ddb1- and Cul4-associated factor 2; Denticleless homolog; Denticleless homolog (Drosophila); Denticleless protein homolog; Dtl; DTL_HUMAN; L2DTL; Lethal(2) denticleless protein homolog; RA regulated nuclear matrix associated protein; RAMP; Retinoic acid regulated nuclear matrix associated protein; Retinoic acid-regulated nuclear matrix-associated protein.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Horse,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	80kDa
Cellular localization:	The nucleuscytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human RAMP/CDT2:181-280/730
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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 and CDKN1A/p21(CIP1). 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. 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.

Tissue specificity: Expressed in placenta and testis, very low expression seen in skeletal muscle. Detected in all hematopoietic tissues examined, with highest expression in thymus and bone marrow. A low level detected in the spleen and lymph node, and barely detectable level in the peripheral leukocytes. RA treatment down-regulated the expression in NT2 cell.

Function:

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 and CDKN1A/p21(CIP1). 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. 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.

Subunit:

Component of the DCX(DTL) E3 ubiquitin ligase complex, at least composed of CUL4 (CUL4A or CUL4B), DDB1, DTL/CDT2 and RBX1. Interacts with CDKN1A and CDT1.

Subcellular Location:

Nucleus. Nucleus membrane; Peripheral membrane protein; Nucleoplasmic side. Cytoplasm, cytoskeleton, centrosome. Note=Nuclear matrix-associated protein. Translocates from the interphase nucleus to the metaphase cytoplasm during mitosis.

Tissue Specificity:

Expressed in placenta and testis, very low expression seen in skeletal muscle. Detected in all hematopoietic tissues examined, with highest expression in thymus and bone marrow. A low level detected in the spleen and lymph node, and barely detectable level in the peripheral leukocytes. RA treatment down-regulated the expression in NT2 cell.

Post-translational modifications:

Ubiquitinated by the anaphase promoting complex/cyclosome (APC/C).
Phosphorylated upon DNA damage, probably by ATM or ATR.

Similarity:

Belongs to the WD repeat cdt2 family.
Contains 7 WD repeats.

SWISS:

Q9NZJ0

Gene ID:

51514

Database links:

UniProtKB/Swiss-Prot: Q9NZJ0.3

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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