

DTL 抗原（重组蛋白）

中文名称： DTL 抗原（重组蛋白）

英文名称： DTL Antigen (Recombinant Protein)

别名： denticleless E3 ubiquitin protein ligase homolog; CDT2; RAMP; DCAF2; L2DTL

储存： 冷冻（-20℃）

相关类别： 抗原

概述

Fusion protein corresponding to a region derived from 531-730 amino acids of human DTL

技术规格

Full name:	denticleless E3 ubiquitin protein ligase homolog
Synonyms:	CDT2; RAMP; DCAF2; L2DTL
Swissprot:	Q9NZJ0
Gene Accession:	BC033540
Purity:	>85%, as determined by Coomassie blue stained SDS-PAGE
Expression system:	Escherichia coli
Tags:	His tag C-Terminus, GST tag N-Terminus
Background:	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), FBXO18/FBH1 and KMT5A (PubMed:16861906, PubMed:16949367, PubMed:16964240, PubMed:17085480, PubMed:1870351)

6, PubMed:18794347, PubMed:18794348, PubMed:19332548, PubMed:20129063, PubMed:23478441, PubMed:23478445, PubMed:23677613). 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).