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Datasheet for 600-401-865

UBC12 Antibody

Overview

Description:	Anti-Human UBC12 (RABBIT) Antibody - 600-401-865
Item No.:	600-401-865
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human, Mouse, Rat, Chimpanzee, Dog, Frog
Host Species:	Rabbit

Product Details

Background:	UBC12 (also known as Ubiquitin-conjugating enzyme E2M, Ubiquitin-protein ligase M, Ubiquitin carrier protein M, and Nedd8-conjugating enzyme Ubc12) is a member of the E2 ubiquitin-conjugating enzyme family. The modification of proteins with ubiquitin is an important cellular mechanism for targeting abnormal or short-lived proteins for degradation. Ubiquitination involves at least three classes of enzymes: ubiquitin-activating enzymes, or E1s, ubiquitin-conjugating enzymes, or E2s, and ubiquitin-protein ligases, or E3s. UBC12 is linked with a ubiquitin-like protein, NEDD8, which can be conjugated to cellular proteins, such as Cdc53/cullin.
Synonyms:	rabbit anti-UBC12 antibody, UBC-12, UBC 12, NEDD-8, NEDD 8, NEDD8 carrier protein antibody, NEDD8 conjugating enzyme Ubc12 antibody, NEDD8 protein ligase antibody, UBE2M antibody, Ubiquitin conjugating enzyme E2 M antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	UBE2M
Reactivity:	Human, Mouse, Rat, Chimpanzee, Dog, Frog
Immunogen Type:	Conjugated Peptide

Immunogen:	This affinity purified antibody was prepared from whole goat serum produced by repeated immunizations with a synthetic peptide corresponding to a C-terminal region near aa 150-183 of Human UBC12 protein.
Purity/Specificity:	UBC12 Antibody is produced by immunoaffinity chromatography using the immunizing peptide after immobilization to a solid phase. Reactivity occurs against human UBC12 protein. However, 100% homology is on record for this protein from human, chimpanzee, frog, mouse, rat and dog as indicated by BLAST analysis. Reactivity with UBC12 proteins from other sources is not known.
Relevant Links:	• UniProtKB - P61081 • NCBI - 4507791 • GeneID - 9040

Application Details

Tested Applications:	ELISA, WB
Application Note:	UBC12 Antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 21 kDa in size corresponding to UBC12 by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:2,000 - 1:10,000
WB:	1:500 - 1:2,000

Formulation

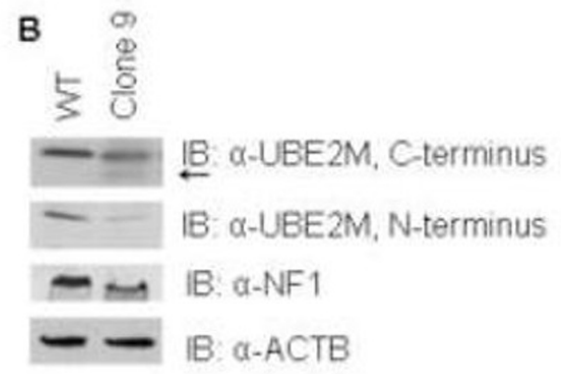
Physical State:	Liquid (sterile filtered)
Concentration:	0.73 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

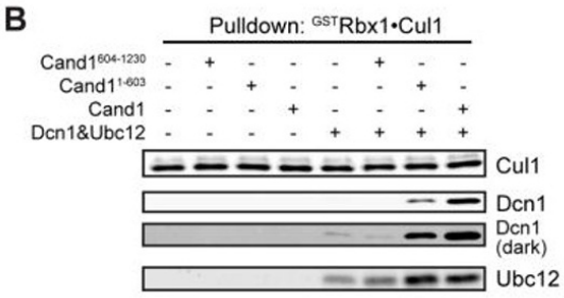
Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

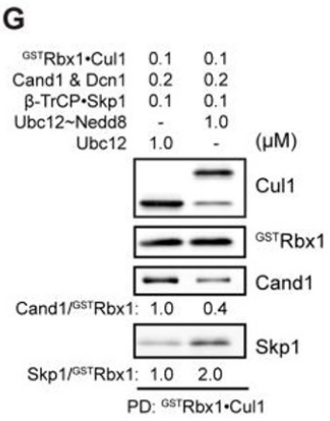
Images



Western Blot
(B) Western blotting analysis of protein lysates from WT HEK 293 cells and clone 9 using α-UBE2M C-terminus (p/n 600-401-865), α-UBE2M N-terminus, and α-NF1 antibodies. Anti—beta-actin (α-ACTB) antibody was used to verify protein loading. Arrow indicates N-terminally truncated UBE2M protein. Fig 2. PMID: 18485440



Western Blot
(B) Cand1 stabilizes Cul1•Dcn1 complex in vitro. Pulldown-WB analysis of recombinant Dcn1 (0.2 µM) and Ubc12 (0.2 µM) bound to recombinant Cul1•GSTRbx1 (0.4 µM) in the presence and absence of recombinant Cand1, Cand11-603, or Cand1604-1230 (all 0.4 µM). A more intense exposure (dark) of the Dcn1 blot is also shown. Fig 3. PMID: 29499133



Western Blot
(G) Neddylation increases the assembly of FBP with Cand1-bound Cul1. Cand1, Dcn1 and Cul1•GSTRbx1 were pre-incubated and then mixed 1:1 (v:v) with Skp1•β-TrCP and Ubc12 or Ubc12 charged to Nedd8 (Ubc12~Nedd8). After 15 min incubation, the protein mixture was incubated with glutathione beads and immobilized proteins were analyzed by WB. (See also Fig S3D.) Fig 3. PMID: 29499133

Western Blot
Western blot analysis is shown using Rockland's Affinity Purified anti-UBC12 antibody to detect Human UBC12 in various preparations. This western blot shows reactivity with purified human UBC12 protein (lane 1), NIH-3T3 cells over expressing UBC12 by infection (lane 2) and endogenous UBC12 in NIH 3T3 cells (p/n W10-000-358) (lane 3). Peptide competition (lane 4) blocks specific reactivity of the antibody with purified UBC12 protein. Comparison to a molecular weight marker (not shown) indicates a single band of ~21.0 kDa corresponding to the expected molecular weight for the protein. The blot was blocked with 5% non-fat dry milk in TBS supplemented with 0.1% Tween-20 at 4° C overnight. After washes the blot was incubated with a 1:1,000 dilution of the antibody at room temperature for 2 h in TBS-Tween. Washes consisted of 3 changes of TBS-Tween buffer for 15 min each. Detection occurred using HRP anti-Rabbit IgG diluted 1:2,000 and signal processing by chemiluminescence reagent with a 10-sec exposure time. Other detection systems will yield similar results. Personal communication Martine Roussel.

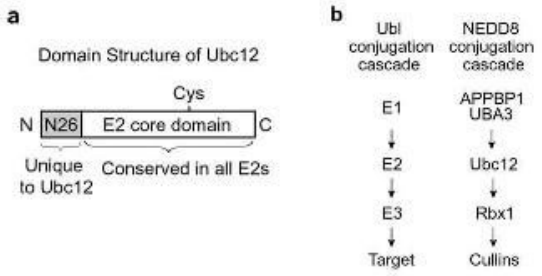


Diagram
Panel A shows the portion of the protein unique to UBC12 and common to all members of the E2 ubiquitin-conjugating enzyme family. Panel B shows UBC12's involvement in UBL and NEDD8 conjugation cascades. See Huang et al for more details.

References

- Liu et al. Cand1-Mediated Adaptive Exchange Mechanism Enables Variation in F-Box Protein Expression. *Molecular Cell* (2018)
- Kolokoltsova OA et al. Alphavirus production is inhibited in neurofibromin 1-deficient cells through activated RAS signalling. *Virology.* (2008)

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