

Datasheet for 100-401-A10**p48 DDB2 Antibody****Overview**

Description:	Anti-p48-DDB2 (C-terminal specific) (RABBIT) Antibody - 100-401-A10
Item No.:	100-401-A10
Size:	100 µL
Applications:	IP, WB, ChIP
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	DDB2 is also known as Damage-specific DNA binding protein 2, DDB p48 subunit, DDBb, UV-damaged DNA-binding protein 2 and UV-DDB 2. The DDB2 gene encodes the small subunit (p48) of DNA damage-binding protein, which is a heterodimer, composed of a large (p127 DDB1) and a small subunit. The DDB2 subunit appears to be required for DNA binding. This nuclear protein functions in nucleotide-excision repair resulting from UV-damaged DNA by binding to pyrimidine dimers. Its defective activity causes the repair defect in the patients with xeroderma pigmentosum complementation group E (XPE). XP-E is a rare human autosomal recessive disease characterized by solar sensitivity, high predisposition for developing cancers on areas exposed to sunlight and, in some cases, neurological abnormalities. However, it remains for mutation analysis to demonstrate whether the defect in XPE patients is in this gene or the gene encoding the large subunit.
Synonyms:	rabbit anti-p48-DDB2 Antibody, damage-specific DNA binding protein 2 antibody, UV-DDB 2 antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	DDB2
Reactivity:	Human

Immunogen Type:	Conjugated Peptide
Immunogen:	This antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 419-427 of Human DDB2 (C-terminal) coupled to KLH.
Purity/Specificity:	This product is monospecific antiserum processed by delipidation and defibrination followed by sterile filtration. This product reacts with human DDB2. Cross reactivity with DDB2 from other sources is not known.
Relevant Links:	• UniProtKB - Q92466 • NCBI - 4557515 • GenelD - 1643

Application Details

Tested Applications:	IP, WB
Suggested Applications:	ChIP (Based on references)
Application Note:	This antibody reacts with human DDB2 tested by western blot and immunoprecipitation. The antibody immunoprecipitates in vitro translated protein and protein from cell lysates (using 293T, and others). Coimmunoprecipitation of related proteins has not been tested. A 47.8 kDa band corresponding to human DDB2 is detected. Most cell lines expressing DDB2 can be used as a positive control. Researchers should determine optimal titers for other applications.
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
IHC:	User Optimized
IP:	User Optimized
WB:	1:500 - 1:1,000

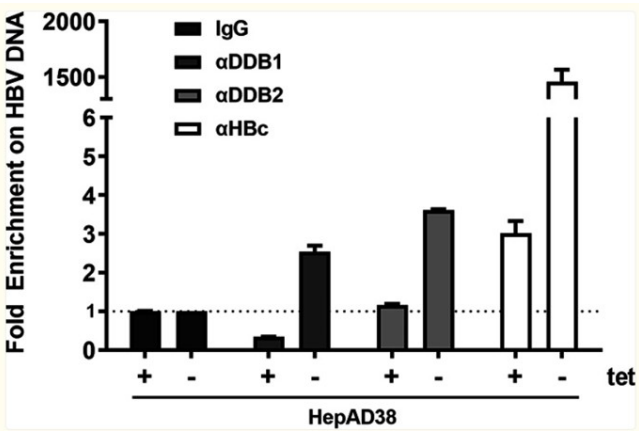
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	85 mg/mL by Refractometry
Buffer:	None
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

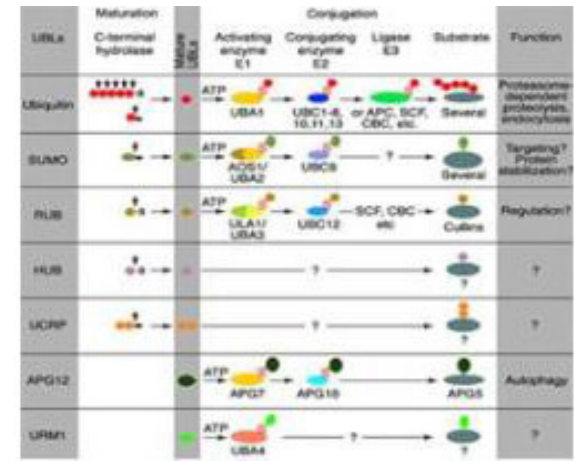


ChIP

Association of UV-DDB with nuclear rcDNA. HepAD38 cells were induced (Tet-) for 6 days to induce nuclear rcDNA accumulation. A ChIP assay was then conducted with nonimmune serum IgG or antibodies against DDB1, DDB2, and HBV core protein (HBc), followed by qPCR of total HBV DNA. The same rcDNA ChIP-qPCR assay performed on uninduced HepAD38 cells (Tet+) served as a cell background control for the integrated HBV transgene. The ChIP-qPCR results were expressed as fold enrichment over the IgG controls (mean and SD; n = 3). Fig 3. PMID: 34705558.

Pathway

Most modifiers mature by proteolytic processing from inactive precursors (a; amino acid). Arrowheads point to the cleavage sites. Ubiquitin is expressed either as polyubiquitin or as a fusion with ribosomal proteins. Conjugation requires activating (E1) and conjugating (E2) enzymes that form thioesters (S) with the modifiers. Modification of cullins by RUB involves SCF(SKP1/cullin-1/F-box protein) /CBC(cullin-2/elongin B/elonginC) -like E3 enzymes that are also involved in ubiquitination. In contrast to ubiquitin, the UBLs do not seem to form multi-UBL chains. UCRP(ISG15) resembles two ubiquitin moieties linked head-to-tail. Whether HUB1 functions as a modifier is currently unclear. APG12 and URM1 are distinct from the other modifiers because they are unrelated in sequence to ubiquitin. Data contributed by S.Jentsch.



References

- Marchetti AL et al. Proteomic Analysis of Nuclear Hepatitis B Virus Relaxed Circular DNA-Associated Proteins Identifies UV-Damaged DNA Binding Protein as a Host Factor Involved in Covalently Closed Circular DNA Formation. *J Virol.* (2022)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.