abcam

Product datasheet

# Anti-DDB1 antibody ab9194

2 Abreviews 11 References 3 Images

## Overview

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|---|---|
| **Product name** | Anti-DDB1 antibody |
| **Description** | Goat polyclonal to DDB1 |
| **Host species** | Goat |
| **Tested applications** | **Suitable for:** WB, IHC-P |
| **Species reactivity** | **Reacts with:** Mouse, Human<br>**Predicted to work with:** Rat, Cow, Dog |
| **Immunogen** | Synthetic peptide corresponding to Human DDB1 aa 1128-1140 (C terminal).<br>Sequence:<br>C-DLIKVVEELTRIH<br>(Peptide available as **ab23152**)<br>Run BLAST with Run BLAST with |
| **Positive control** | WB: HeLa lysate, HepG2 lysate, Jurkat lysate, NIH3T3 lysate and NSO lysate. IHC-P: Human cortex tissue. |
| **General notes** | Recognizes the large subunit of DNA damage-binding protein - functions in nucleotide-excision repair. Its defective activity causes the repair defect in the patients with xeroderma pigmentosum complementation group E (XPE). DDB-1 (damage-specific DNA binding protein 1) is also known as: DDBA; XAP1; XPCE; XPE-BF;UV-DDB1<br>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.<br>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As |

## Properties

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| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw |

cycles.

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| **Storage buffer** | pH: 7.30<br>Preservative: 0.02% Sodium azide<br>Constituents: Tris buffered saline, 0.5% BSA |
| **Purity** | Immunogen affinity purified |
| **Purification notes** | Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide. |
| **Primary antibody notes** | Recognizes the large subunit of DNA damage-binding protein - functions in nucleotide-excision repair. Its defective activity causes the repair defect in the patients with xeroderma pigmentosum complementation group E (XPE). DDB-1 (damage-specific DNA binding protein 1) is also known as: DDBA; XAP1; XPCE; XPE-BF;UV-DDB1 |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab9194 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **WB** | ★★★★☆ **(2)** | Use a concentration of 0.01 - 2 µg/ml. Predicted molecular weight: 127 kDa.<br>1 hour primary incubation is recommended for this product. |
| **IHC-P** | | Use a concentration of 4 - 6 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. |

## Target

**Function** Required for DNA repair. Binds to DDB2 to form the UV-damaged DNA-binding protein complex (the UV-DDB complex). The UV-DDB complex may recognize UV-induced DNA damage and recruit proteins of the nucleotide excision repair pathway (the NER pathway) to initiate DNA repair. The UV-DDB complex preferentially binds to cyclobutane pyrimidine dimers (CPD), 6-4 photoproducts (6-4 PP), apurinic sites and short mismatches. Also appears to function as a component of numerous distinct DCX (DDB1-CUL4-X-box) E3 ubiquitin-protein ligase complexes which mediate the ubiquitination and subsequent proteasomal degradation of target proteins. The functional specificity of the DCX E3 ubiquitin-protein ligase complex is determined by the variable substrate recognition component recruited by DDB1. DCX(DDB2) (also known as DDB1-CUL4-ROC1, CUL4-DDB-ROC1 and CUL4-DDB-RBX1) may ubiquitinate histone H2A, histone H3 and histone H4 at sites of UV-induced DNA damage. The ubiquitination of histones may facilitate their removal from the nucleosome and promote subsequent DNA repair. DCX(DDB2) also ubiquitinates XPC, which may enhance DNA-binding by XPC and promote NER. DCX(DTL) plays a role in PCNA-dependent polyubiquitination of CDT1 and MDM2-dependent ubiquitination of TP53 in response to radiation-induced DNA damage and during DNA replication. DCX(ERCC8) (the CSA complex) plays a role in transcription-coupled repair (TCR). May also play a role in ubiquitination of CDKN1B/p27kip when associated with CUL4 and SKP2.

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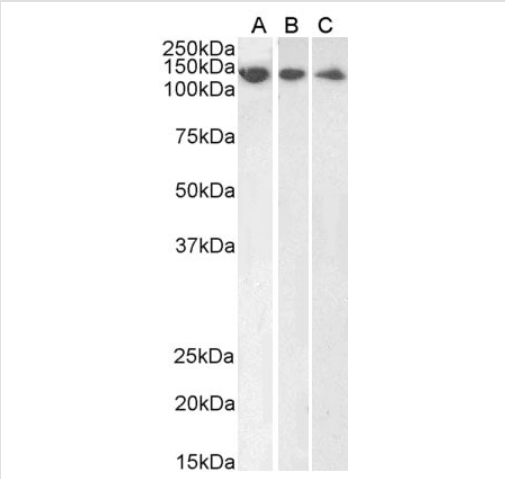
| **Pathway** | Protein modification; protein ubiquitination. |
| **Sequence similarities** | Belongs to the DDB1 family. |
| **Post-translational modifications** | Ubiquitinated by CUL4A. Subsequently degraded by ubiquitin-dependent proteolysis. |
| **Cellular localization** | Cytoplasm. Nucleus. Primarily cytoplasmic. Translocates to the nucleus following UV irradiation and subsequently accumulates at sites of DNA damage. |

## Images




Western blot - Anti-DDB1 antibody (ab9194)

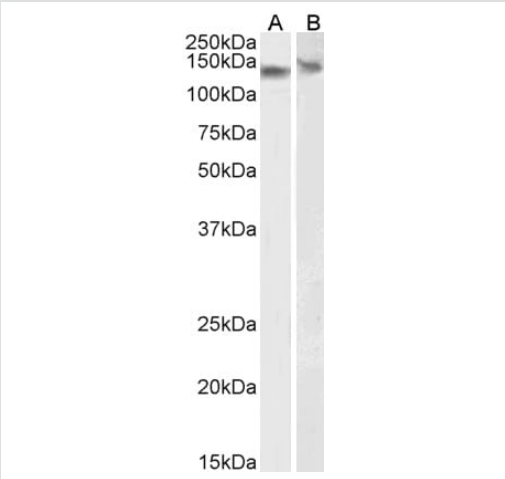
**All lanes :** Anti-DDB1 antibody (ab9194) at 1 µg/ml

**Lane 1 :** HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate
**Lane 2 :** Hep G2 (Human liver hepatocellular carcinoma cell line) whole cell lysate
**Lane 3 :** Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate

Lysates/proteins at 35 µg per lane.

**Predicted band size:** 127 kDa
**Observed band size:** 140 kDa

Primary incubation for 1 hour. Detected by chemiluminescence.
RIPA buffer used.




Western blot - Anti-DDB1 antibody (ab9194)

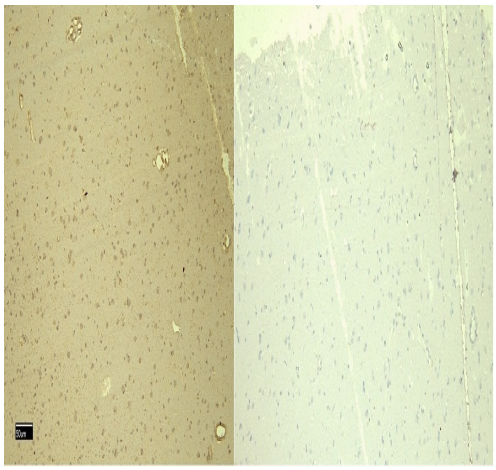
**All lanes :** Anti-DDB1 antibody (ab9194) at 0.01 µg/ml

**Lane 1 :** NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate
**Lane 2 :** NSO (Murine myeloma cells) whole cell lysate

Lysates/proteins at 35 µg per lane.

**Predicted band size:** 127 kDa
**Observed band size:** 140,150 kDa

Primary incubation for 1 hour. Detected by chemiluminescence.
RIPA buffer used.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DDB1 antibody (ab9194)

Left panel: Immunohistochemical analysis of paraffin-embedded human cortex tissue labelling DDB1 with ab9194 at 4µg/ml. Heat mediated antigen retrieval with citrate buffer pH 6, HRP-staining.

Right panel: Immunohistochemical analysis of paraffin-embedded human cortex tissue with no primary antibody.



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