

## Product datasheet

### HRP Anti-DDB2 antibody [EPR9811] ab205484

Recombinant RabMAb

3 Images

#### Overview

<b>Product name</b>	HRP Anti-DDB2 antibody [EPR9811]
<b>Description</b>	HRP Rabbit monoclonal [EPR9811] to DDB2
<b>Host species</b>	Rabbit
<b>Conjugation</b>	HRP
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: HeLa cell lysate. IHC: Human normal skin (paraffin embedded tissue).
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C. Store In the Dark.
<b>Storage buffer</b>	<p>pH: 7.40</p> <p>Preservative: 0.1% Proclin 300 Solution</p> <p>Constituents: PBS, 1% BSA, 30% Glycerol (glycerin, glycerine)</p>
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR9811
<b>Isotype</b>	IgG

## Applications

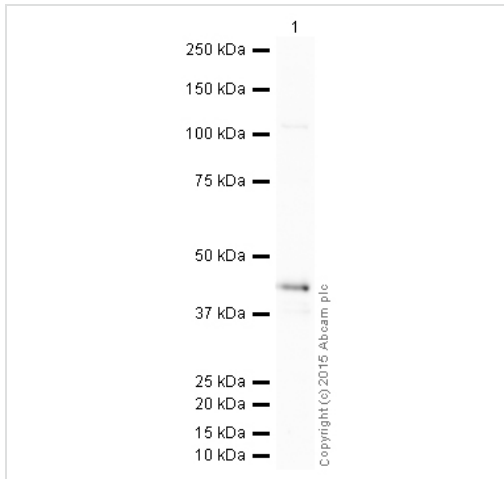
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab205484 in the following tested applications.

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

Application	Abreviews	Notes
WB		1/2000. Detects a band of approximately 45 kDa (predicted molecular weight: 48 kDa).
IHC-P		1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

## Target

<b>Function</b>	Required for DNA repair. Binds to DDB1 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 the substrate recognition module for the DCX (DDB1-CUL4-X-box) E3 ubiquitin-protein ligase complex DDB1-CUL4-ROC1 (also known as CUL4-DDB-ROC1 and CUL4-DDB-RBX1). The DDB1-CUL4-ROC1 complex 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. The DDB1-CUL4-ROC1 complex also ubiquitinates XPC, which may enhance DNA-binding by XPC and promote NER. Isoform D1 and isoform D2 inhibit UV-damaged DNA repair.
<b>Tissue specificity</b>	Ubiquitously expressed; with highest levels in corneal endothelium and lowest levels in brain. Isoform D1 is highly expressed in brain and heart. Isoform D2, isoform D3 and isoform D4 are weakly expressed.
<b>Pathway</b>	Protein modification; protein ubiquitination.
<b>Involvement in disease</b>	Defects in DDB2 are a cause of xeroderma pigmentosum complementation group E (XP-E) [MIM:278740]; also known as xeroderma pigmentosum V (XP5). 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.
<b>Sequence similarities</b>	Belongs to the WD repeat DDB2/WDR76 family. Contains 5 WD repeats.
<b>Domain</b>	The DWD box is required for interaction with DDB1.
<b>Post-translational modifications</b>	Phosphorylation by ABL1 negatively regulate UV-DDB activity. Ubiquitinated by CUL4A in response to UV irradiation. Ubiquitination appears to both impair DNA-binding and promotes ubiquitin-dependent proteolysis. Degradation of DDB2 at sites of DNA damage may be a prerequisite for their recognition by XPC and subsequent repair. CUL4A-mediated degradation appears to be promoted by ABL1.
<b>Cellular localization</b>	Nucleus. Accumulates at sites of DNA damage following UV irradiation.



Western blot - HRP Anti-DDB2 antibody [EPR9811] (ab205484)

HRP Anti-DDB2 antibody [EPR9811] (ab205484) at 1/2000 dilution + HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate at 10 µg

Developed using the ECL technique.

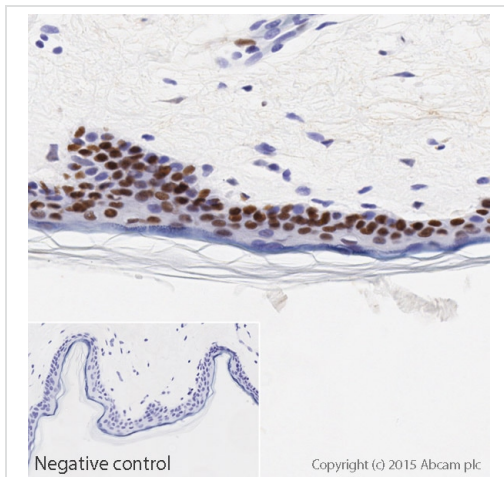
Performed under reducing conditions.

**Predicted band size:** 48 kDa

**Observed band size:** 45 kDa

**Exposure time:** 1 minute

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 3% milk before being incubated with ab205484 overnight at 4°C. Antibody binding was visualised using ECL development solution [ab133406](#).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - HRP Anti-DDB2 antibody [EPR9811] (ab205484)

IHC image of DDB2 staining in a section of formalin-fixed paraffin-embedded normal human skin\*, performed on a Leica BOND™.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab205484, 1/100 dilution, for 15 mins at room temperature. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset negative control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

\*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

HRP Anti-DDB2 antibody [EPR9811] (ab205484)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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