

## Anti-DDB2 Antibody (3L729)

### Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	3L729
Purification:	Affinity-chromatography

### Applications

#### 1. Western Blot

- Positive WB detected in: PC-3 whole cell lysate
- All lanes: DDB2 antibody at 1:1000
- Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution
- Predicted band size: 47 kDa
- Observed band size: 47 kDa

2. IHC image of TMAH-00333 diluted at 1:50 and staining in paraffin-embedded human salivary gland tissue performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.46% DAB.

Verified Activity: 3. IHC image of TMAH-00333 diluted at 1:50 and staining in paraffin-embedded human cervical cancer performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.46% DAB.

4. Overlay Peak curve showing A549 cells stained with TMAH-00333 (red line) at 1:50. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody ( $1\mu\text{g}/1*10^6$  cells) for 45min at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG (H+L) at 1:200 dilution for 35min at 4°C. Control antibody (green line) was rabbit IgG ( $1\mu\text{g}/1*10^6$  cells) used under the same conditions. Acquisition of >10,000 events was performed.

Application: ELISA, WB, IHC, FCM

Recommended WB:1:500-1:2000; IHC:1:50-1:200; FCM:1:50-1:200.

### Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

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### Antigen Details

Immunogen: A synthetic peptide: Human DDB2

Antigen Species: Human

Gene ID: 1643

Uniprot ID: Q92466

Synonyms: UV-damaged DNA-binding protein 2;DDBb;DDB 2;UV-DDB 2;DDB p48 subunit;Damage-specific DNA-binding protein 2;DNA damage-binding protein 2

Biology Area: Epigenetics and Nuclear Signaling, Cancer

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### Research Background

Protein, which is both involved in DNA repair and protein ubiquitination, as part of the UV-DDB complex and DCX (DDB1-CUL4-X-box) complexes, respectively. Core component of the UV-DDB complex (UV-damaged DNA-binding protein complex), a complex that recognizes 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 functions as the substrate recognition module for the DCX (DDB2-CUL4-X-box) E3 ubiquitin-protein ligase complex DDB2-CUL4-ROC1 (also known as CUL4-DDB-ROC1 and CUL4-DDB-RBX1). The DDB2-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 DDB2-CUL4-ROC1 complex also ubiquitinates XPC, which may enhance DNA-binding by XPC and promote NER. The DDB2-CUL4-ROC1 complex also ubiquitinates KAT7/HBO1 in response to DNA damage, leading to its degradation: recognizes KAT7/HBO1 following phosphorylation by ATR. Inhibits UV-damaged DNA repair. Inhibits UV-damaged DNA repair.

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