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KD-Validated Anti-DDB2 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1130

Product Information

Application	WB, FC, ICC
Primary Accession	Q92466
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB 2805
Calculated MW	47864
Gene Name	DDB2
Aliases	DDB2; Damage Specific DNA Binding Protein 2; UV-Damaged DNA-Binding Protein 2; DDB P48 Subunit; UV-DDB2; DDBB; XPE; Xeroderma Pigmentosum Group E Protein; DNA Damage-Binding Protein 2; FLJ34321; Damage-Specific DNA Binding Protein 2 (48kD); Damage-Specific DNA Binding Protein 2, 48kDa; Damage-Specific DNA-Binding Protein 2; UV-DDB; DDBb
Immunogen	A synthesized peptide derived from human DDB2

Additional Information

Gene ID	1643
Other Names	DNA damage-binding protein 2, DDB p48 subunit, DDBb, Damage-specific DNA-binding protein 2, UV-damaged DNA-binding protein 2, UV-DDB 2, DDB2

Protein Information

Name	DDB2
Function	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 (PubMed:10882109, PubMed:11278856, PubMed:11705987, PubMed:12732143, PubMed:15882621, PubMed:16473935, PubMed:18593899, PubMed:32789493, PubMed:9892649). 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 (PubMed:10882109, PubMed:11278856, PubMed:11705987, PubMed:12944386, PubMed:14751237, PubMed:16260596, PubMed:32789493). The UV-DDB complex preferentially binds to cyclobutane pyrimidine dimers (CPD), 6-4 photoproducts (6-4 PP), apurinic sites and short mismatches (PubMed:10882109, PubMed:11278856, PubMed:11705987, PubMed:12944386, PubMed:16260596). 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) (PubMed:12732143, PubMed:15882621, PubMed:16473935, PubMed:18593899, PubMed:26572825). The DDB2-CUL4-ROC1 complex may ubiquitinate histone H2A, histone H3 and histone H4 at sites of UV- induced DNA damage (PubMed:16473935, PubMed:16678110). The ubiquitination of histones may facilitate their removal from the nucleosome and promote subsequent DNA repair (PubMed:16473935, PubMed:16678110). The DDB2-CUL4-ROC1 complex also ubiquitinates XPC, which may enhance DNA-binding by XPC and promote NER (PubMed:15882621). 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 (PubMed:26572825).

Cellular Location

Nucleus. Chromosome. Note=Accumulates at sites of DNA damage following UV irradiation.

Tissue Location

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.