Anti-DDB2 antibody

Description	Unconjugated Rabbit polyclonal to DDB2

Model	STJ191776
Host	Rabbit
Reactivity	Human, Mouse
Applications	ELISA, WB
Immunogen	Synthesized peptide derived from human DDB2 protein.
Immunogen Region	260-340aa
Gene ID	1643
Gene Symbol	DDB2
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	DDB2 Polyclonal Antibody detects endogenous levels of protein.
Tissue Specificity	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.
Purification	DDB2 antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	DNA damage-binding protein 2 DDB p48 subunit DDBb Damage-specific DNA-binding protein 2 UV-damaged DNA-binding protein 2 UV-DDB 2
Molecular Weight	46 kDa

Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid form in PBS containing 50% glycerol,and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:2718OMIM:278740
Alternative 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
Function	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.
Sequence and Domain Family	The DWD box is required for interaction with DDB1. Interblade loops of the WD repeat region mediate most of the interaction with DNA. A hairpin between blades 5 and 6 inserts into DNA minor groove and mediates recognition of lesions and separation of the damaged and undamaged strands.
Cellular Localization	Nucleus. Accumulates at sites of DNA damage following UV irradiation.
Post-translational Modifications	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. Ubiquitinated, leading to proteasomal degradation, and deubiquitinated by USP24.