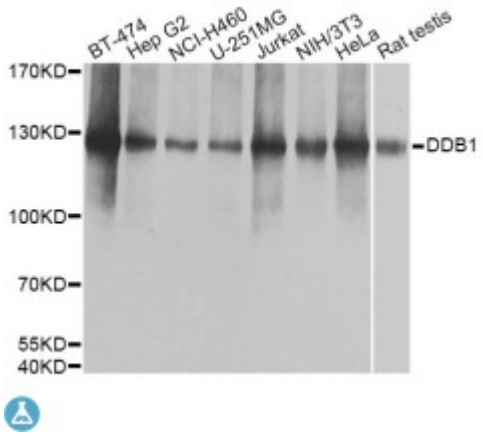
Anti-DDB1 Antibody



Description	The protein encoded by this gene is the large subunit (p127) of the heterodimeric DNA damage-binding (DDB) complex while another protein (p48) forms the small subunit. This protein complex functions in nucleotide-excision repair and binds to DNA following UV damage. Defective activity of this complex causes the repair defect in patients with xeroderma pigmentosum complementation group E (XPE) - an autosomal recessive disorder characterized by photosensitivity and early onset of carcinomas. However, it remains for mutation analysis to demonstrate whether the defect in XPE patients is in this gene or the gene encoding the small subunit. In addition, Best vitelliform mascular dystrophy is mapped to the same region as this gene on 11q, but no sequence alternations of this gene are demonstrated in Best disease patients. The protein encoded by this gene also functions as an adaptor molecule for the cullin 4 (CUL4) ubiquitin E3 ligase complex by facilitating the binding of substrates to this complex and the ubiquitination of proteins.
Model	STJ116218
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	WB
Immunogen	A synthetic peptide corresponding to a sequence within amino acids 1000 to the C-terminus of human DDB1 (NP_001914.3).
Gene ID	1642
Gene Symbol	DDB1
Dilution range	WB 1:500 - 1:2000

Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	DNA damage-binding protein 1 DDB p127 subunit DNA damage-binding protein a DDBa Damage-specific DNA-binding protein 1 HBV X-associated protein 1 XAP-1 UV-damaged DNA-binding factor UV-damaged DNA-binding pro
Molecular Weight	126.968 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:2717OMIM:600045Reactome:R-HSA-110314
Alternative Names	DNA damage-binding protein 1 DDB p127 subunit DNA damage-binding protein a DDBa Damage-specific DNA-binding protein 1 HBV X-associated protein 1 XAP-1 UV-damaged DNA-binding factor UV-damaged DNA-binding pro
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,
Cellular Localization	Cytoplasm, Nucleus,
Post-translational Modifications	Phosphorylated by ABL1,

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