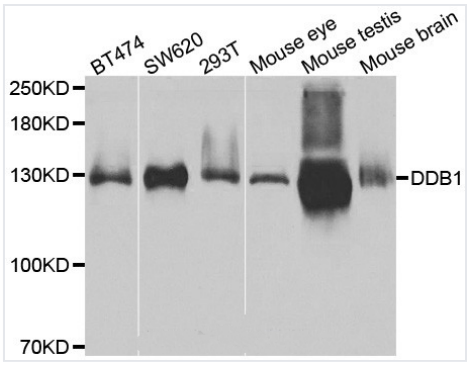
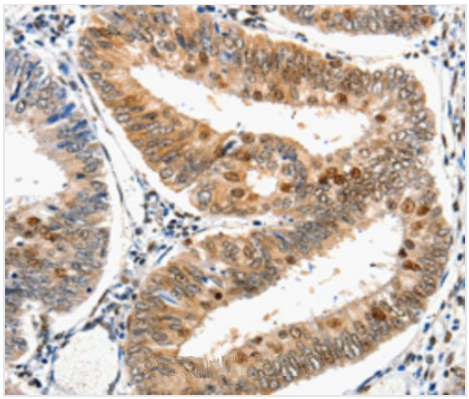
DDB1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	DDB1, Polyclonal Antibody
Full Product Name	DDB1 Antibody
Product Gene Name	anti-DDB1 antibody
Product Synonym Names	XPE; DDBA; XAP1; XPCE; XPE-BF; UV-DDB1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Purity/Purification	Antigen affinity purification
Concentration	1mg/mL (lot specific)
Preparation and Storage	Store at -20 degree C (regular) and -80 degree C (long term). Avoid freeze / thaw cycles.
Molecular Weight	50,611 Da
OMIM	600045
Immunogen	A synthetic peptide of human DDB1
Buffer	PBS with 0.02% sodium azide, 50% glycerol, pH7.3
Santa Cruz Alternative	Potential replacement for Santa Cruz Biotechnology antibody catalog# sc-137132 / sc-137142 / sc-136180 / sc-376860
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-DDB1 antibody	Western Blot (WB), Immunohistochemistry (IHC)
Related Product Information for anti-DDB1 antibody	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.
Other Notes	Small volumes of anti-DDB1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for DDB1 purchase	MBS2516944 is an antibody targeting DDB1. Also known as DDB1 Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.



Western Blot (WB) of anti-DDB1 antibody
Western blot analysis of extracts of various cell lines, using DDB1 antibody.



Immunohistochemistry (IHC) of anti-DDB1 antibody
Immunohistochemistry of paraffin-embedded human cervical cancer tissue using DDB1 antibody.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for DDB1. It may not necessarily be applicable to this product.

NCBI GI #	148529014
NCBI GeneID	1642
NCBI Accession #	NP_001914.3
UniProt Secondary Accession #	O15176; Q13289; Q58F96; A6NG77; B2R648; B4DG00
UniProt Related Accession #	Q16531
GenBank Nucleotide #	NM_001923.4
NCBI Official Full Name	DNA damage-binding protein 1
NCBI Official Synonym Full Names	damage-specific DNA binding protein 1, 127kDa
NCBI Official Symbol	DDB1
NCBI Official Synonym Symbols	XPE; DDBA; XAP1; XPCE; XPE-BF; UV-DDB1
UniProt Protein Name	DNA damage-binding protein 1
UniProt Synonym Protein Names	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 protein 1; UV-DDB 1; XPE-binding factor; XPE-BF; Xeroderma pigmentosum group E-complementing protein; XPCe
Protein Family	DNA damage-binding protein
UniProt Gene Name	DDB1
UniProt Synonym Gene Names	XAP1; DDBa; XAP-1; UV-DDB 1; XPE-BF; XPCe
UniProt Entry Name	DDB1_HUMAN
NCBI Protein Information	DNA damage-binding protein 1; DDB p127 subunit; DNA damage-binding protein a; HBV X-associated protein 1; UV-DDB 1; UV-damaged DNA-binding factor; UV-damaged DNA-binding protein 1; XAP-1; XPE-binding factor; xeroderma pigmentosum group E-complementing protein

UniProt Comments for DDB1	DDB1: the large subunit of theUV- damaged DNA-binding protein complex (the UV-DDB complex) required for DNA repair. 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 p53 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 p27kip when associated with CUL4 and SKP2. Component of the UV-DDB complex which includes DDB1 and DDB2. The UV-DDB complex interacts with monoubiquitinated histone H2A and binds to XPC via the DDB2 subunit. Component of numerous DCX (DDB1-CUL4-X-box) E3 ubiquitin-protein ligase complexes which consist of a core of DDB1, CUL4A or CUL4B and RBX1. DDB1 may recruit specific substrate targeting subunits to the DCX complex. These substrate targeting subunits are generally known as DCAF (DDB1- and CUL4-associated factor) or CDW (CUL4-DDB1-associated WD40-repeat) proteins. Interacts with AMBRA1, ATG16L1, BTRC, DCAF1, DCAF17, DCAF16, DCAF15, DDA1, DET1, DTL, ERCC8, FBXW5, FBXW8, GRWD1, DCAF6, KATNB1, NLE1, NUP43, PAFAH1B1, PHIP, PWP1, RBBP4, RBBP5, RBBP7, RFWD2, SNRNP40, VPRBP, WDR5, WDR5B, WDR12, DCAF4, DCAF5, DCAF11, WDR26, DCAF10, WDR39, DCAF12, WDR42, DCAF8, WDR53, WDR59, WDR61, DCAF7, WSB1, WSB2 and WDTC1. DCX complexes may associate with the COP9 signalosome, and this inhibits the E3 ubiquitin-protein ligase activity of the complex. Interacts with NF2, TSC1 and TSC2. Interacts with Simian virus 5 protein V and the HBV X protein. Interaction with SV5 protein V may prevent the recruitment of DCAF proteins to DCX complexes. Interacts with EIF2C1 and EIF2C2. Associates with the E3 ligase complex containing DYRK2, UBR5, DDB1 and VPRBP proteins (EDVP complex). Interacts directly with DYRK2. Belongs to the DDB1 family. Protein type: DNA repair, damage Chromosomal Location of Human Ortholog: 11q12-q13 Cellular Component: nucleoplasm; extracellular space; cytoplasm; nucleus Molecular Function: protein binding; DNA binding; damaged DNA binding Biological Process: proteasomal ubiquitin-dependent protein catabolic process; Wnt receptor signaling pathway; positive regulation of viral genome replication; viral reproduction; nucleotide-excision repair; protein ubiquitination during ubiquitin-dependent protein catabolic process; nucleotide-excision repair, DNA damage removal; positive regulation of viral protein levels in host cell; interaction with symbiont; DNA repair; negative regulation of apoptosis
Research Articles on DDB1	**1.** The identification of Vpr mutants which associate with DCAF1 but only poorly with DDB1 suggests that DCAF1 is necessary but is not sufficient for the Vpr association with DDB1-containing E3 ligase complex.
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