DDB1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	DDB1, Polyclonal Antibody
Full Product Name	DDB1 Antibody, FITC conjugated
Product Gene Name	anti-DDB1 antibody
Product Synonym 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 protein 1; UV-DDB 1; XPE-binding factor; XPE-BF; Xeroderma pigmentosum group E-complementing protein; XPCe; DDB1; XAP1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid
Purity/Purification	>95%, Protein G purified
Preparation and Storage	Upon receipt, store at -20 degree C or -80 degree C. Avoid repeated freeze.
Matching Pairs	Unconjugated Antibody: DDB1 (MBS7105229) FITC Conjugated Antibody: DDB1 (MBS7105231)
Molecular Weight	50,611 Da
OMIM	U18299 mRNA
3D Structure	ModBase 3D Structure for Q16531
Immunogen	Recombinant Human DNA damage-binding protein 1 protein (741-943AA)
Conjugation	FITC
Buffer	Preservative: 0.03% Proclin 300 Constituents: 50% Glycerol, 0.01M PBS, pH 7.4
Product Categories/Family for anti-DDB1 antibody	Epigenetics and Nuclear Signaling
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-DDB1 antibody	ELISA (EIA)

Related Product Information for anti-DDB1 antibody	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.
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	MBS7105231 is an antibody targeting DDB1. Also known as DDB1 Antibody, FITC conjugated. Reactive in Human. Host: Rabbit.

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 Primary Accession #	Q16531
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
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
NCBI Protein Information	DNA damage-binding protein 1

NCBI Summary for DDB1	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. [provided by RefSeq, May 2012]
Research Articles on DDB1	**1.** The DDB1 is acetylated and acetylation promotes DDB1 binding to CUL4.
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