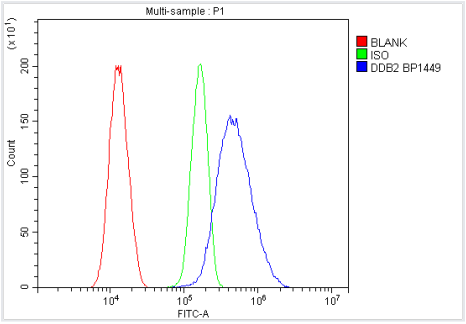
DDB2 Antibody – Rabbit Polyclonal

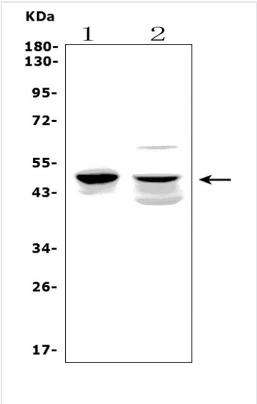
PRODUCT OVERVIEW

Product Name	DDB2, Polyclonal Antibody
Full Product Name	Anti-DDB2 Antibody
Product Gene Name	anti-DDB2 antibody
Product Synonym 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
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Lyophilized Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Purity/Purification	Immunogen affinity purified.
Specificity	No cross reactivity with other proteins.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen store at -20 degree C for a longer time. Avoid repeated freezing and thawing.
OMIM	phenotype 600811
3D Structure	ModBase 3D Structure for Q92466
Immunogen	E Coli-derived human DDB2 recombinant protein (Position: Q10-R424).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-DDB2 antibody	Western Blot (WB), Flow Cytometry (FC/FACS), Direct ELISA (EIA)
Application Notes for anti-DDB2 antibody	WB: 0.25-0.5ug/ml (Human) FC/FACS: 1-3ug/1x106 cells (Human) Direct ELISA: 0.1-0.5ug/ml (Human) Tested Species: In-house tested species with positive results.
Related Product Information for anti-DDB2 antibody	Description: Rabbit IgG polyclonal antibody for DDB2 detection. Tested with WB, FCM, Direct ELISA in Human. Background: DNA damage-binding protein 2 is a protein that in humans is encoded by the DDB2 gene. This gene encodes a protein that is necessary for the repair of ultraviolet light-damaged DNA. This protein is the smaller subunit of a heterodimeric protein complex that participates in nucleotide excision repair, and this complex mediates the ubiquitylation of histones H3 and H4, which facilitates the cellular response to DNA damage. And this subunit appears to be required for DNA binding. Mutations in this gene cause xeroderma pigmentosum complementation group E, a recessive disease that is characterized by an increased sensitivity to UV light and a high predisposition for skin cancer development, in some cases accompanied by neurological abnormalities. Two transcript variants encoding different isoforms have been found for this gene.

Product References and Citations for anti-DDB2 antibody	1. Dualan, R., Brody, T., Keeney, S., Nichols, A. F., Admon, A., Linn, S. Chromosomal localization and cDNA cloning of the genes (DDB1 and DDB2) for the p127 and p48 subunits of a human damage-specific DNA binding protein. Genomics 29: 62-69, 1995. 2. Groisman, R., Polanowska, J., Kuraoka, I., Sawada, J., Saijo, M., Drapkin, R., Kisselev, A. F., Tanaka, K., Nakatani, Y. The ubiquitin ligase activity in the DDB2 and CSA complexes is differentially regulated by the COP9 signalosome in response to DNA damage. Cell 113: 357-367, 2003. 3. Hwang, B. J., Ford, J. M., Hanawalt, P. C., Chu, G. Expression of the p48 xeroderma pigmentosum gene is p53-dependent and is involved in global genomic repair. Proc. Nat. Acad. Sci. 96: 424-428, 1999.
Other Notes	Small volumes of anti-DDB2 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 DDB2 purchase	MBS1752985 is an antibody targeting DDB2. Reactive in Human. Host: Rabbit.



Flow Cytometry (FC/FACS) of anti-DDB2 antibody



Western Blot (WB) of anti-DDB2 antibody
Figure 1. Western blot analysis of DDB2 using anti-DDB2 antibody.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for DDB2. It may not necessarily be applicable to this product.

NCBI GI #	12230033
NCBI GeneID	1643
NCBI Accession #	Q92466.1
UniProt Primary Accession #	Q92466
UniProt Related Accession #	Q92466
NCBI Official Full Name	DNA damage-binding protein 2
NCBI Official Synonym Full Names	damage specific DNA binding protein 2
NCBI Official Symbol	DDB2
NCBI Official Synonym Symbols	XPE; DDBB; UV-DDB2
UniProt Protein Name	DNA damage-binding protein 2
UniProt Synonym Protein Names	DDB p48 subunit; DDBb; Damage-specific DNA-binding protein 2; UV-damaged DNA-binding protein 2; UV-DDB 2
Protein Family	DNA damage-binding protein
UniProt Gene Name	DDB2
UniProt Synonym Gene Names	DDBb; UV-DDB 2
UniProt Entry Name	DDB2_HUMAN
NCBI Protein Information	DNA damage-binding protein 2

NCBI Summary for DDB2	This gene encodes a protein that is necessary for the repair of ultraviolet light-damaged DNA. This protein is the smaller subunit of a heterodimeric protein complex that participates in nucleotide excision repair, and this complex mediates the ubiquitylation of histones H3 and H4, which facilitates the cellular response to DNA damage. This subunit appears to be required for DNA binding. Mutations in this gene cause xeroderma pigmentosum complementation group E, a recessive disease that is characterized by an increased sensitivity to UV light and a high predisposition for skin cancer development, in some cases accompanied by neurological abnormalities. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2014]
UniProt Comments for DDB2	DDB2: 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. 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 the DCX (DDB1-CUL4-X-box) E3 ubiquitin-protein ligase complex DDB1-CUL4- ROC1 (also known as CUL4-DDB-ROC1 and CUL4-DDB-RBX1), which includes CUL4A or CUL4B, DDB1, DDB2 and RBX1. DDB2 may function as the substrate recognition module within this complex. The DDB1- CUL4-ROC1 complex may associate with the COP9 signalosome, and this inhibits the E3 ubiquitin-protein ligase activity of the complex. A large number of other DCX complexes may also exist in which an alternate substrate targeting subunit replaces DDB2. These targeting subunits are generally known as DCAF (DDB1- and CUL4-associated factor) or CDW (CUL4-DDB1-associated WD40-repeat) proteins. Isoform D1 and isoform D2 do not interact with DDB1. Expression is induced in response to treatment with IR or UV and this requires p53/TP53 activity. 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. Belongs to the WD repeat DDB2/WDR76 family. 5 isoforms of the human protein are produced by alternative splicing. Protein type: DNA repair, damage Chromosomal Location of Human Ortholog: 11p12-p11 Cellular Component: nucleoplasm; protein complex; cell junction Molecular Function: protein binding; DNA binding; damaged DNA binding; ubiquitin-protein ligase activity Biological Process: protein autoubiquitination; protein polyubiquitination; nucleotide-excision repair; pyrimidine dimer repair; nucleotide-excision repair, DNA damage removal; DNA repair; response to UV Disease: Xeroderma Pigmentosum, Complementation Group E
Research Articles on DDB2	**1.** Identification of a novel homozygous deletion in DDB2 gene in Chinese Xeroderma pigmenosum type E patients having unique clinical features and summary of all DDB2 mutations. {review]
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