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Anti-DDB2 Picoband Antibody

Catalog # ABO12443

Product Information

Application	WB
Primary Accession	Q92466
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for DNA damage-binding protein 2(DDB2) detection. Tested with WB in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	1643
Other 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
Calculated MW	47864
Application Details	Western blot, 0.1-0.5 □g/ml, Human
Subcellular Localization	Nucleus . Accumulates at sites of DNA damage following UV irradiation.
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. .
Source	Eukaryota
Protein Name	DNA damage-binding protein 2
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E.coli-derived human DDB2 recombinant protein (Position: M1-T115). Human DDB2 shares 58.3% amino acid (aa) sequence identity with mouse DDB2.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated

freezing and thawing.

Protein Information

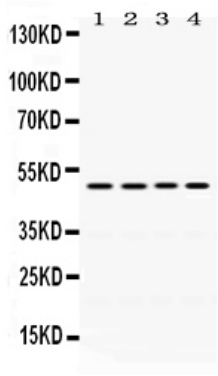
Name	DDB2
Function	Protein, which is both involved in DNA repair and protein ubiquitination, as part of the UV-DDB complex and DCX (DDB1-CUL4-X-box) complexes, respectively (PubMed:10882109, PubMed:11278856, PubMed:11705987, PubMed:12732143, PubMed:15882621, PubMed:16473935, PubMed:18593899, PubMed:32789493, PubMed:9892649). Core component of the UV-DDB complex (UV-damaged DNA-binding protein complex), a complex that recognizes UV-induced DNA damage and recruit proteins of the nucleotide excision repair pathway (the NER pathway) to initiate DNA repair (PubMed:10882109, PubMed:11278856, PubMed:11705987, PubMed:12944386, PubMed:14751237, PubMed:16260596, PubMed:32789493). The UV-DDB complex preferentially binds to cyclobutane pyrimidine dimers (CPD), 6-4 photoproducts (6-4 PP), apurinic sites and short mismatches (PubMed:10882109, PubMed:11278856, PubMed:11705987, PubMed:12944386, PubMed:16260596). Also functions as the substrate recognition module for the DCX (DDB2-CUL4-X-box) E3 ubiquitin-protein ligase complex DDB2-CUL4-ROC1 (also known as CUL4-DDB-ROC1 and CUL4-DDB-RBX1) (PubMed:12732143, PubMed:15882621, PubMed:16473935, PubMed:18593899, PubMed:26572825). The DDB2-CUL4-ROC1 complex may ubiquitinate histone H2A, histone H3 and histone H4 at sites of UV- induced DNA damage (PubMed:16473935, PubMed:16678110). The ubiquitination of histones may facilitate their removal from the nucleosome and promote subsequent DNA repair (PubMed:16473935, PubMed:16678110). The DDB2-CUL4-ROC1 complex also ubiquitinates XPC, which may enhance DNA-binding by XPC and promote NER (PubMed:15882621). The DDB2-CUL4-ROC1 complex also ubiquitinates KAT7/HBO1 in response to DNA damage, leading to its degradation: recognizes KAT7/HBO1 following phosphorylation by ATR (PubMed:26572825).
Cellular Location	Nucleus. Chromosome. Note=Accumulates at sites of DNA damage following UV irradiation.
Tissue Location	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.

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.

Images

Anti- DDB2 Picoband antibody, ABO12443, Western



blottingAll lanes: Anti DDB2 (ABO12443) at 0.5ug/mlLane 1: A431 Whole Cell Lysate at 40ugLane 2: SW620 Whole Cell Lysate at 40ugLane 3: HELA Whole Cell Lysate at 40ugLane 4: JURKAT Whole Cell Lysate at 40ugPredicted bind size: 48KDObserved bind size: 48KD