

ARG58523 anti-DDB2 antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes DDB2
Tested Reactivity	Hu
Tested Application	FACS, ICC/IF, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	DDB2
Species	Human
Immunogen	Human DDB2 recombinant protein (Position: M1-T115). Human DDB2 shares 58.3% amino acid (aa) sequence identity with Mouse DDB2.
Conjugation	Un-conjugated
Alternate Names	DDBb; Damage-specific DNA-binding protein 2; DDBB; UV-damaged DNA-binding protein 2; DDB p48 subunit; UV-DDB2; UV-DDB 2; DNA damage-binding protein 2

Application Instructions

Application table	Application	Dilution
	FACS	1:150 - 1:500
	ICC/IF	1:200 - 1:1000
	WB	0.1 - 0.5 µg/ml

Application Note * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

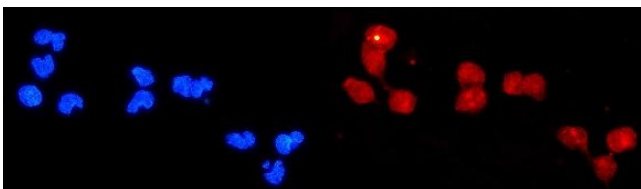
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	0.9% NaCl, 0.2% Na ₂ HPO ₄ , 0.05% Sodium azide and 5% BSA.
Preservative	0.05% Sodium azide
Stabilizer	5% BSA
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

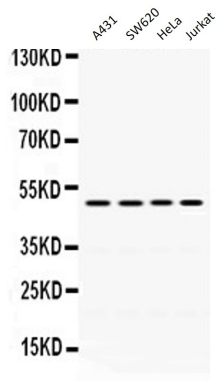
Gene Symbol	DDB2
Gene Full Name	damage-specific DNA binding protein 2, 48kDa
Background	This gene encodes a protein that is necessary for the repair of ultraviolet light-damaged DNA. This protein is the smaller subunit of a heterodimeric protein complex that participates in nucleotide excision repair, 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]
Function	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. [UniProt]
Calculated Mw	48 kDa
PTM	Phosphorylation by ABL1 negatively regulate UV-DDB activity. Ubiquitinated by CUL4A in response to UV irradiation. Ubiquitination appears to both impair DNA-binding and promotes ubiquitin-dependent proteolysis. Degradation of DDB2 at sites of DNA damage may be a prerequisite for their recognition by XPC and subsequent repair. CUL4A-mediated degradation appears to be promoted by ABL1. Ubiquitinated, leading to proteasomal degradation, and deubiquitinated by USP24. [UniProt]
Cellular Localization	Nucleus. Accumulates at sites of DNA damage following UV irradiation. [UniProt]

Images



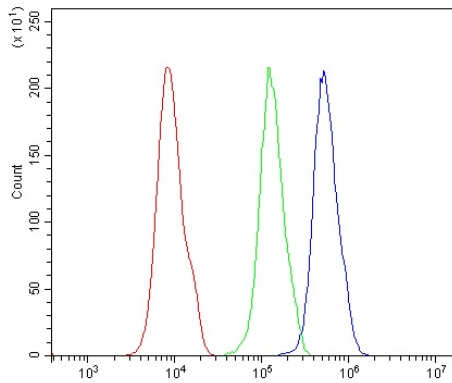
ARG58523 anti-DDB2 antibody ICC/IF image

Immunofluorescence: U2OS cells were blocked with 10% goat serum and then stained with ARG58523 anti-DDB2 antibody (red) at 2 µg/ml dilution, overnight at 4°C. DAPI (blue) for nuclear staining.



ARG58523 anti-DDB2 antibody WB image

Western blot: 40 μg of A431, 40 μg of SW620, 40 μg of HeLa and 40 μg of Jurkat cell lysates stained with ARG58523 anti-DDB2 antibody at 0.5 $\mu\text{g}/\text{ml}$ dilution.



ARG58523 anti-DDB2 antibody FACS image

Flow Cytometry: 293T cells were blocked with 10% normal goat serum and then stained with ARG58523 anti-DDB2 antibody (blue) at 1 $\mu\text{g}/10^6$ cells for 30 min at 20°C, followed by incubation with DyLight[®]488 labelled secondary antibody. Isotype control antibody (green) was rabbit IgG (1 $\mu\text{g}/10^6$ cells) used under the same conditions. Unlabelled sample (red) was also used as a control.