ARG54132
anti-DDB1 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes DDB1
Tested Reactivity	Hu, Ms, Rat, Mk
Tested Application	WB
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Target Name	DDB1
Species	Human
Immunogen	Purified recombinant human DDB1 protein fragments expressed in E.coli.
Conjugation	Un-conjugated
Alternate Names	XPCE; XPCe; DDB p127 subunit; DDBa; UV-damaged DNA-binding factor; HBV X-associated protein 1; DDBA; UV-damaged DNA-binding protein 1; XPE; XAP-1; Damage-specific DNA-binding protein 1; XPE-BF; DNA damage-binding protein a; UV-DDB1; UV-DDB 1; XAP1; Xeroderma pigmentosum group E-complementing protein; XPE-binding factor; DNA damage-binding protein 1

Application Instructions

Application table

Application	Dilution
WB	1:1000

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

Observed Size: 127 kDa

Properties

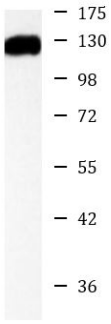
Form	Liquid
Buffer	Ascites
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 13194 Mouse

	GeneID: 1642 Human
	Swiss-port # Q16531 Human
	Swiss-port # Q3U1J4 Mouse
Gene Symbol	DDB1
Gene Full Name	damage-specific DNA binding protein 1, 127kDa
Background	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.
Function	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. [UniProt]
Research Area	Gene Regulation antibody
Calculated Mw	127 kDa
PTM	Phosphorylated by ABL1. Ubiquitinated by CUL4A. Subsequently degraded by ubiquitin-dependent proteolysis.
Cellular Localization	Cytoplasm. Nucleus. Note: Primarily cytoplasmic. Translocates to the nucleus following UV irradiation and subsequently accumulates at sites of DNA damage.

Images



ARG54132 anti-DDB1 antibody WB image

Western blot: 3T3 cell lysate stained with ARG54132 anti-DDB1 antibody at 1:1000 dilution.