SANTA CRUZ BIOTECHNOLOGY, INC.

DDB1 (H-300): sc-25367

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Damaged DNA binding protein (DDB) is a heterodimer composed of two subunits, p127 and p48, which are designated DDB1 and DDB2, respectively. The DDB heterodimer is involved in repairing DNA damaged by ultraviolet light. Specifically, DDB, also designated UV-damaged DNA binding protein (UV-DDB), xeroderma pigmentosum group E binding factor (XPE-BF) and hepatitis B virus X-associated protein 1 (XAP1), binds to damaged cyclobutane pyrimidine dimers (CPDs). Mutations in the DDB2 gene are implicated as causes of xeroderma pigmentosum group E, an autosomal recessive disease in which patients are defective in nucleotide excision DNA repair. XPE is characterized by hypersensitivity of the skin to sunlight with a high frequency of skin cancer as well as neurologic abnormalities. The hepatitis B virus (HBV) X protein interacts with DDB1, which may mediate HBx transactivation.

REFERENCES

1. Dualan, R., et al. 1995. 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.
2. Nichols, A.F., et al. 1996. Mutations specific to the xeroderma pigmentosum group E DDB-phenotype. J. Biol. Chem. 271: 24317-2420.

CHROMOSOMAL LOCATION

Genetic locus: DDB1 (human) mapping to 11q12.2; Ddb1 (mouse) mapping to 19 A.

SOURCE

DDB1 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 of DDB1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

DDB1 (H-300) is recommended for detection of DDB1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DDB1 siRNA (h): sc-37797, DDB1 siRNA (m): sc-37798, DDB1 shRNA Plasmid (h): sc-37797-SH, DDB1 shRNA Plasmid (m): sc-37798-SH, DDB1 shRNA (h) Lentiviral Particles: sc-37797-V and DDB1 shRNA (m) Lentiviral Particles: sc-37798-V.

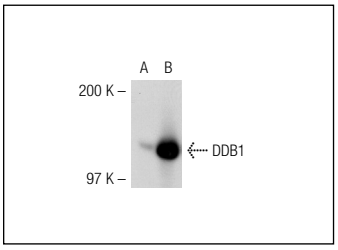
Molecular Weight of DDB1: 127 kDa.

Positive Controls: DDB1 (h): 293T Lysate: sc-116124, HeLa + UV irradiated cell lysate: sc-2221 or human platelet extract: sc-363773.

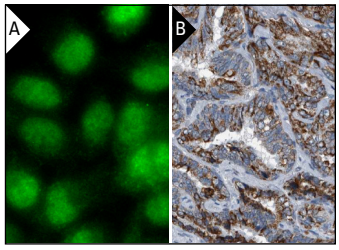
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



DDB1 (H-300): sc-25367. Western blot analysis of DDB1 expression in non-transfected: sc-117752 (**A**) and human DDB1 transfected: sc-116124 (**B**) 293T whole cell lysates.



DDB1 (H-300): sc-25367. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human seminal vesicle tissue showing cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Kattan, Z., et al. 2008. Damaged DNA binding protein 2 plays a role in breast cancer cell growth. PLoS ONE 3: e2002.
2. Waning, D.L., et al. 2008. Cul4A is required for hematopoietic cell viability and its deficiency leads to apoptosis. Blood 112: 320-329.
3. Minig, V., et al. 2009. Identification of DDB2 protein as a transcriptional regulator of constitutive SOD2 gene expression in human breast cancer cells. J. Biol. Chem. 284: 14165-14176.
4. Latini, P., et al. 2011. CSA and CSB proteins interact with p53 and regulate its Mdm2-dependent ubiquitination. Cell Cycle 10: 3719-3730.
5. Zou, Y., et al. 2013. CUL4B promotes replication licensing by up-regulating the CDK2-CDC6 cascade. J. Cell Biol. 200: 743-756.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **DDB1 (E-11): sc-376860** or **DDB1 (B-1): sc-137142**, our highly recommended monoclonal alternatives to DDB1 (H-300).