DDB2 (2246C4a): sc-81246

**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 (UVDDB), xeroderma pigmentosum group E binding factor (XBP) and hepatitis B virus X-associated protein-1 (XAP-1), 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. XBP 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**


5. Matsunuma, R., et al. 2015. UV damage-induced phosphorylation of HBO1 kinase involves the switch between lincRNA-p21 and DDB2 expression.


**CHROMOSOMAL LOCATION**

Genetic locus: DDB2 (human) mapping to 11p11.2.

**SOURCE**

DDB2 (2246C4a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to the N-terminal region of DDB2 of human origin.

**PRODUCT**

Each vial contains 100 µg IgGκ kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 1.0% stabilizer protein.

**RESEARCH USE**

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

**APPLICATIONS**

DDB2 (2246C4a) is recommended for detection of DDB2 of 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) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for DDB2 siRNA (h): sc-37799, DDB2 shRNA Plasmid (h): sc-37799-SH and DDB2 shRNA (h) Lentiviral Particles: sc-37799-V.

Molecular Weight of DDB2: 48 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, SK-N-MC nuclear extract: sc-2154 or K-562 nuclear extract: sc-2130.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1. Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2. Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2030 (0.5 ml agarose/2.0 ml).


**DATA**

![Western blot analysis of DDB2 expression](image1)

![Western blot analysis of DDB2 expression in HeLa nuclear extract](image2)

**SELECT PRODUCT CITATIONS**


**STORAGE**

For immediate and continuous use, store at 4°C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

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