

UFD2 (RQ-5): sc-100610

BACKGROUND

UFD2, also designated ubiquitin conjugation factor E4 (UBE4B), binds to the ubiquitin moieties of preformed conjugates and catalyzes ubiquitin chain assembly in conjunction with E1, E2 and E3. During apoptosis, UFD2 is proteolytically cleaved at Asp 123 by caspase-6 and granzyme B, and is cleaved with approximately ten-fold less efficiency at Asp 109 by caspase-3 and caspase-7. In yeast, E4 activity is linked to cell survival under stress conditions, indicating that eukaryotes use E4-dependent proteolysis pathways for multiple cellular functions. In mammals, highest expression of UFD2 is in ovary, testis, heart and skeletal muscle.

REFERENCES

1. Koegl, M., et al. 1999. A novel ubiquitination factor, E4, is involved in multiubiquitin chain assembly. *Cell* 96: 635-644.
2. Conforti, L., et al. 2000. A UFD2/D4Cole1e chimeric protein and over-expression of Rbp7 in the slow Wallerian degeneration (WldS) mouse. *Proc. Natl. Acad. Sci. USA* 97: 11377-11382.
3. Krona, C., et al. 2003. Screening for gene mutations in a 500 kb neuroblastoma tumor suppressor candidate region in chromosome 1p; mutation and stage-specific expression in UBE4B/UFD2. *Oncogene* 22: 2343-2351.
4. Spinette, S., et al. 2004. UFD2, a novel autoantigen in scleroderma, regulates sister chromatid separation. *Cell Cycle* 3: 1638-1644.
5. Saeki, Y., et al. 2004. Definitive evidence for UFD2-catalyzed elongation of the ubiquitin chain through Lys 48 linkage. *Biochem. Biophys. Res. Commun.* 320: 840-845.
6. Bazirgan, O.A., et al. 2005. Cdc48-UFD2-Rad23: the road less ubiquitinated? *Nat. Cell Biol.* 7: 207-209.
7. SWISS-PROT/TrEMBL (O95155). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>.

CHROMOSOMAL LOCATION

Genetic locus: UBE4B (human) mapping to 1p36.22.

SOURCE

UFD2 (RQ-5) is a mouse monoclonal antibody raised against recombinant UFD2 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

UFD2 (RQ-5) is recommended for detection of UFD2 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for UFD2 siRNA (h): sc-45980, UFD2 shRNA Plasmid (h): sc-45980-SH and UFD2 shRNA (h) Lentiviral Particles: sc-45980-V.

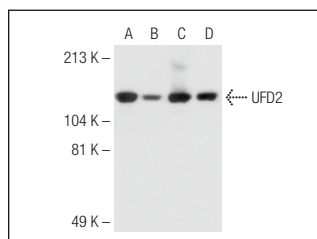
Molecular Weight of UFD2: 146 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, MOLT-4 cell lysate: sc-2233 or Raji whole cell lysate: sc-364236.

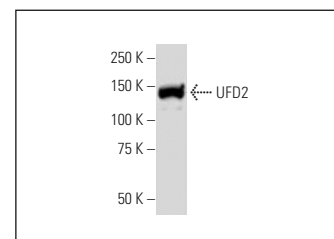
RECOMMENDED SUPPORT REAGENTS

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-2003 (0.5 ml agarose/2.0 ml).

DATA



UFD2 (RQ-5): sc-100610. Western blot analysis of UFD2 expression in WI 38 (A) and K-562 (B) nuclear extracts and Raji (C) and MOLT-4 (D) whole cell lysates.



UFD2 (RQ-5): sc-100610. Western blot analysis of UFD2 expression in HeLa nuclear extract.

SELECT PRODUCT CITATIONS

1. Du, C., et al. 2016. UBE4B targets phosphorylated p53 at serines 15 and 392 for degradation. *Oncotarget* 7: 2823-2836.
2. Kim, H., et al. 2022. SF3B4 depletion retards the growth of A549 non-small cell lung cancer cells via UBE4B-mediated regulation of p53/p21 and p27 expression. *Mol. Cells* 45: 718-728.

RESEARCH USE

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