

# UFD2 (7): sc-136115

## 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 overexpression 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; Ube4b (mouse) mapping to 4 E2.

## SOURCE

UFD2 (7) is a mouse monoclonal antibody raised against amino acids 1034-1241 of UFD2 of human origin.

## PRODUCT

Each vial contains 50 µg IgG<sub>1</sub> in 0.5 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.

## RESEARCH USE

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

## APPLICATIONS

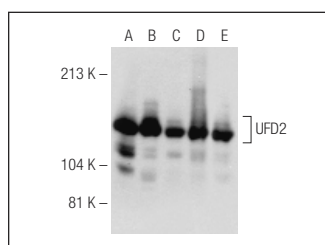
UFD2 (7) is recommended for detection of UFD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for UFD2 siRNA (h): sc-45980, UFD2 siRNA (m): sc-45981, UFD2 shRNA Plasmid (h): sc-45980-SH, UFD2 shRNA Plasmid (m): sc-45981-SH, UFD2 shRNA (h) Lentiviral Particles: sc-45980-V and UFD2 shRNA (m) Lentiviral Particles: sc-45981-V.

Molecular Weight of UFD2: 146 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, HeLa nuclear extract: sc-2120 or K-562 nuclear extract: sc-2130.

## DATA



UFD2 (7): sc-136115. Western blot analysis of UFD2 expression in HeLa (A), WI-38 (B) and K-562 (C) nuclear extracts and Raji (D) and MOLT-4 (E) whole cell lysates.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.