

# UFD2 (H-240): sc-98953

## 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., Hoppe, T., Schlenker, S., Ulrich, H.D., Mayer, T.U. and Jentsch S. 1999. A novel ubiquitination factor, E4, is involved in multiubiquitin chain assembly. *Cell* 96: 635-644.
2. Conforti, L., Tarlton, A., Mack, T.G., Mi, W., Buckmaster, E.A., Wagner, D., Perry, V.H. and Coleman, M.P. 2000. A UFD2/D4Cole1e chimeric protein and overexpression of Rbp7 in the slow Wallerian degeneration (WIDS) mouse. *Proc. Natl. Acad. Sci. USA* 97: 11377-11382.
3. Krona, C., Ejeskär, K., Abel, F., Kogner, P., Bjelke, J., Björk, E., Sjöberg, R.M. and Martinsson, T. 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., Lengauer, C., Mahoney, J.A., Jallepalli, P.V., Wang, Z., Casciola-Rosen, L. and Rosen, A. 2004. UFD2, a novel autoantigen in scleroderma, regulates sister chromatid separation. *Cell Cycle* 3: 1638-1644.
5. Saeki, Y., Tayama, Y., Toh-e, A. and Yokosawa, H. 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. and Hampton, R.Y. 2005. Cdc48-UFD2-Rad23: the road less ubiquitinated? *Nat. Cell Biol.* 7: 207-209.

## CHROMOSOMAL LOCATION

Genetic locus: UBE4B (human) mapping to 1p36.22; Ube4b (mouse) mapping to 4 E2.

## SOURCE

UFD2 (H-240) is a rabbit polyclonal antibody raised against amino acids 525-747 mapping within an internal region of UFD2 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.

## STORAGE

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

## APPLICATIONS

UFD2 (H-240) 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), 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

UFD2 (H-240) is also recommended for detection of UFD2 in additional species, including equine, canine, bovine, porcine and avian.

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.

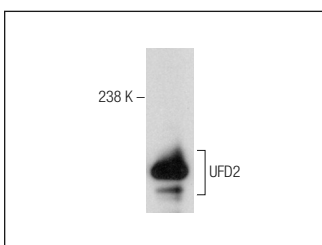
Molecular Weight of UFD2: 146 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or human heart extract: sc-363763.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



UFD2 (H-240): sc-98953. Western blot analysis of UFD2 expression in human heart tissue extract.

## RESEARCH USE

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

**MONOS**  
Satisfaction  
Guaranteed

Try **UFD2 (C-1): sc-377072** or **UFD2 (7): sc-136115**, our highly recommended monoclonal alternatives to UFD2 (H-240).