SANTA CRUZ BIOTECHNOLOGY, INC.

UFD2 (K-16): sc-54479

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 10-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 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide 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.

Blocking peptide available for competition studies, sc-54479 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

UFD2 (K-16) 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), 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 (K-16) 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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.