

# UBA3 (K-17): sc-79798

## BACKGROUND

Ubiquitin is an abundant, highly conserved protein found in all eukaryotic cells either free or covalently attached to cellular proteins. The primary function of ubiquitin in mammalian systems is to clear abnormal, foreign and improperly folded proteins by targeting them for proteasome degradation. In the yeast, *Saccharomyces cerevisiae*, ubiquitin-like proteins include Rub1, Ula1, Uba3, Ubc12 and Ubc9. Rub1 shares 53% homology with ubiquitin and requires activation via ULA1, UBA3 and UBC12 in order to conjugate to substrates directed to different proteolytic systems. Skp1 connects cell cycle regulators to the ubiquitin proteolysis machinery.

## REFERENCES

1. Ciechanover, A. 1994. The ubiquitin-proteasome proteolytic pathway. *Cell* 79: 13-21.
2. Ciechanover, A. and Schwartz, A.L. 1994. The ubiquitin-mediated proteolytic pathway: mechanisms of recognition of the proteolytic substrate and involvement in the degradation of native cellular proteins. *FASEB J.* 8: 182-191.
3. Hochstrasser, M. 1995. Ubiquitin, proteasomes and the regulation of intracellular protein degradation. *Curr. Opin. Cell Biol.* 7: 215-223.
4. Bai, C., Sen, P., Hofmann, K., Ma, L., Goebel, M., Harper, J.W. and Elledge, S.J. 1996. Skp1 connects cell cycle regulators to the ubiquitin proteolysis machinery through a novel motif, the F-box. *Cell* 86: 263-274.
5. Liakopoulos, D., Doenges, G., Matuschewski, K, and Jentsch, S. 1998. A novel protein modification pathway related to the ubiquitin system. *EMBO J.* 17: 2208-2214.
6. Gong, L. and Yeh, E.T. 1999. Identification of the activating and conjugating enzymes of the NEDD8 conjugation pathway. *J. Biol. Chem.* 274: 12036-12042.

## CHROMOSOMAL LOCATION

Genetic locus: UBA3 (human) mapping to 3p14.1; Uba3 (mouse) mapping to 6 D3.

## SOURCE

UBA3 (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of UBA3 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-79798 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

UBA3 (K-17) is recommended for detection of UBA3 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).

UBA3 (K-17) is also recommended for detection of UBA3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for UBA3 siRNA (h): sc-76783, UBA3 shRNA Plasmid (h): sc-76783-SH and UBA3 shRNA (h) Lentiviral Particles: sc-76783-V.

Molecular Weight of UBA3: 58 kDa.

Positive Controls: Mouse brain extract: sc-2253.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **UBA3 (B-10): sc-377352** or **UBA3 (E-5): sc-377272**, our highly recommended monoclonal alternatives to UBA3 (K-17).