

Ub+1 (40B3): sc-58450

BACKGROUND

Ubiquitin (Ub) is among the most phylogenetically conserved proteins known. The primary function of ubiquitin is to clear abnormal, foreign and improperly folded proteins by targeting them for degradation by the 26S Proteasome. This small, 76 amino acid protein can be covalently attached to cellular proteins via an isopeptide linkage between the carboxy-terminal group of ubiquitin and lysine amino groups on the acceptor protein. For proteolysis to occur, ubiquitin oligomers must be assembled. Ubiquitin chains on proteolytic substrates are commonly found to have an isopeptide bridge between Lysine 48 of one ubiquitin molecule and the carboxy-terminus of a neighboring ubiquitin molecule. Ubiquitin also plays a role in regulating signal transduction cascades through the elimination inhibitory proteins, such as I κ B- α and p27.

REFERENCES

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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. Pagano, M., Tam, S.W., Theodoras, A.M., Beer-Romero, P., Del Sal, G., Chau, V., Yew, P.R., Draetta, G.F. and Rolfe, M. 1995. Role of the ubiquitin-proteasome pathway in regulating abundance of the cyclin-dependent kinase inhibitor p27. *Science* 269: 682-685.
5. Jennissen, H.P. 1995. Ubiquitin and the enigma of intracellular protein degradation. *Eur. J. Biochem.* 231: 1-30.
6. Muller, S. and Schwartz, L.M. 1995. Ubiquitin in homeostasis, development and disease. *Bioessays* 17: 677-684.
7. Hochstrasser, M. 1996. Protein degradation or regulation: Ub the judge. *Cell* 84: 813-815.
8. Chen, Z.J., Parent, L. and Maniatis, T. 1996. Site-specific phosphorylation of I κ B- α by a novel ubiquitination-dependent protein kinase activity. *Cell* 84: 853-862.

CHROMOSOMAL LOCATION

Genetic locus: UBB (human) mapping to 17p11.2.

SOURCE

Ub+1 (40B3) is a mouse monoclonal antibody raised against a synthetic peptide mapping at the C-terminus of Ub+1 of human origin.

PRODUCT

Each vial contains IgG₁ in 100 μ l of PBS with < 0.1% sodium azide and 50% glycerol.

APPLICATIONS

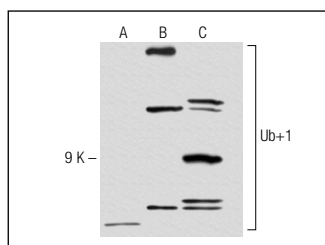
Ub+1 (40B3) is recommended for detection of Ub+1 (the mutant form of ubiquitin produced by molecular frameshift) of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000) and immunoprecipitation [1-2 μ l per 100-500 μ g of total protein (1 ml of cell lysate)]; non cross-reactive with Ub.

Suitable for use as control antibody for Ub siRNA (h): sc-29513, Ub shRNA Plasmid (h): sc-29513-SH and Ub shRNA (h) Lentiviral Particles: sc-29513-V.

Molecular Weight of Ub+1: 9 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

DATA



Ub+1 (40B3): sc-58450. Western blot analysis of Ub+1 expression in non-transfected (A), human Ub transfected (B) and human Ub+1 transfected (C) Bosc23 whole cell lysates.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

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.