SANTA CRUZ BIOTECHNOLOGY, INC.

Ub (FL-76): sc-9133

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 Proteosome. 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 Lys 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 IκB-α and p27.

SOURCE

Ub (FL-76) is a rabbit polyclonal antibody raised against amino acids 1-76 representing full length Ub 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.

Available as agarose conjugate for immunoprecipitation, sc-9133 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

Ub (FL-76) is recommended for detection of ubiquitin, polyubiquitin and ubiquitinated proteins of mouse, rat, human, *Drosophila melanogaster* and *Xenopus laevis* 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Ub (FL-76) is also recommended for detection of ubiquitin, polyubiquitin and ubiquitinated proteins in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Ub siRNA (h): sc-29513, Ub siRNA (m): sc-36770, Ub shRNA Plasmid (h): sc-29513-SH, Ub shRNA Plasmid (m): sc-36770-SH, Ub shRNA (h) Lentiviral Particles: sc-29513-V and Ub shRNA (m) Lentiviral Particles: sc-36770-V.

Molecular Weight of Ub: 9 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or Jurkat whole cell lysate: sc-2204.

RESEARCH USE

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

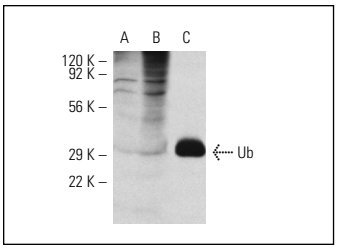
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

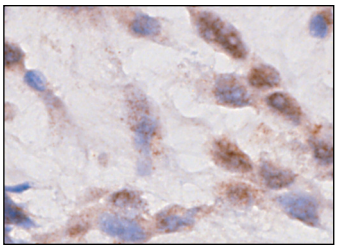
STORAGE

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

DATA



Ub (FL-76): sc-9133. Western blot analysis of lysates from control Jurkat cells (**A**), Jurkat cells treated with the proteasome inhibitor LLnL showing accumulation of ubiquitinated proteins (**B**) and human recombinant Ub (**C**).



Ub (FL-76): sc-9133. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing cytoplasmic and nuclear staining.

SELECT PRODUCT CITATIONS

1. Steinman, R., et al. 2001. Cell cycle-independent upregulation of $p27^{Kip1}$ by $p21^{Waf1}$ in K562 cells. Oncogene 20: 6524-6530.
2. Stroschein, S.L., et al. 2001. Smad3 recruits the anaphase-promoting complex for ubiquitination and degradation of SnoN. Genes Dev. 21: 2822-2836.
3. Chandrasekhar, A., et al. 2011. Modulation of nicotinamide adenine dinucleotide phosphate oxidase activity through sequential posttranslational modifications of p22 phagocytic oxidase during capacitation and acrosome reaction in goat spermatozoa. J. Anim. Sci. 89: 2995-3007.
4. Dinh, P.X., et al. 2011. Antagonistic effects of cellular poly(C) binding proteins on vesicular stomatitis virus gene expression. J. Virol. 85: 9459-9471.
5. Wang, S., et al. 2012. CHIP functions as a novel suppressor of tumour angiogenesis with prognostic significance in human gastric cancer. Gut 62: 496-508.
6. Saha, A., et al. 2012. E2F1 mediated apoptosis induced by the DNA damage response is blocked by EBV nuclear antigen 3C in lymphoblastoid cells. PLoS Pathog. 8: e1002573.
7. Yin, N., et al. 2012. IQGAP1 interacts with Aurora-A and enhances its stability and its role in cancer. Biochem. Biophys. Res. Commun. 421: 64-69.
8. Van Duyne, R., et al. 2012. Localization and sub-cellular shuttling of HTLV-1 tax with the miRNA machinery. PLoS ONE 7: e40662.