

Ub (1B4-UB): sc-58449

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

1. Ciechanover, A. 1994. The ubiquitin-proteasome proteolytic pathway. *Cell* 79: 13-21.
2. Ciechanover, A., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Ub (1B4-UB) is a mouse monoclonal antibody raised against Ub from erythrocytes of bovine origin conjugated to bovine gamma globulin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Ub (1B4-UB) is recommended for detection of ubiquitin of human and bovine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 flow cytometry (1 μ g per 1 x 10⁶ cells).

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: 9 kDa.

Positive Controls: Ub (h): 293T Lysate: sc-111402, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

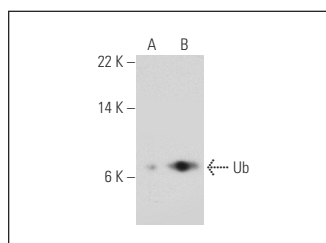
STORAGE

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

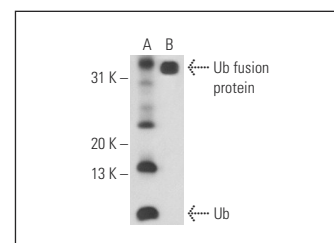
RESEARCH USE

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

DATA



Ub (1B4-UB): sc-58449. Western blot analysis of Ub expression in non-transfected: sc-117752 (A) and human Ub transfected: sc-111402 (B) 293T whole cell lysates.



Ub (1B4-UB): sc-58449. Western blot analysis of Ub expression in Jurkat whole cell lysate (A) and human recombinant Ub fusion protein (B).

SELECT PRODUCT CITATIONS

1. Li, X., et al. 2011. Cullin 4B protein ubiquitin ligase targets peroxiredoxin III. for degradation. *J. Biol. Chem.* 286: 32344-32354.
2. Kang, H.N., et al. 2012. Abrogation of Gli3 expression suppresses the growth of colon cancer cells via activation of p53. *Exp. Cell Res.* 318: 539-549.
3. Vasilenko, N.L., et al. 2012. Bovine herpesvirus-1 VP8 interacts with DNA damage binding protein-1 (DDB1) and is monoubiquitinated during infection. *Virus Res.* 167: 56-66.
4. Chhangani, D., et al. 2016. Mahogunin ring finger 1 confers cytoprotection against mutant SOD1 aggregates and is defective in an ALS mouse model. *Neurobiol. Dis.* 86: 16-28.

PROTOCOLS

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



See **Ub (P4D1): sc-8017** for Ub antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647.