

Ubiquitin (6C1): sc-47721

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 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 I κ B- α and p27.

CHROMOSOMAL LOCATION

Genetic locus: UBB (human) mapping to 17p11.2; Ubb (mouse) mapping to 11 B2.

SOURCE

Ubiquitin (6C1) is a mouse monoclonal antibody raised against erythrocyte Ubiquitin of bovine origin.

PRODUCT

Each vial contains 100 μ l ascites containing IgG_{2a} with < 0.1% sodium azide.

APPLICATIONS

Ubiquitin (6C1) is recommended for detection of Ubiquitin of multiple species 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)].

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

Molecular Weight of Ubiquitin: 9 kDa.

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

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.

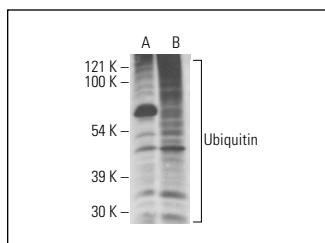
PROTOCOLS

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

RESEARCH USE

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

DATA



Ubiquitin (6C1): sc-47721. Western blot analysis of Ubiquitin expression in control Jurkat cells (A) and Jurkat cells treated with the proteasome inhibitor LLnL (B), showing accumulation of ubiquitinated proteins in lane B.

SELECT PRODUCT CITATIONS

- Soós, V., et al. 2010. Transcriptome analysis of germinating maize kernels exposed to smoke-water and the active compound KAR₁. *BMC Plant Biol.* 10: 236.
- Fuhs, S.R. and Insel, P.A. 2011. Caveolin-3 undergoes SUMOylation by the SUMO E3 ligase PIASy: sumoylation affects G protein-coupled receptor desensitization. *J. Biol. Chem.* 286: 14830-14841.
- Andresen, C.A., et al. 2014. Protein interaction screening for the ankyrin repeats and suppressor of cytokine signaling (SOCS) box (ASB) family identify Asb11 as a novel endoplasmic reticulum resident ubiquitin ligase. *J. Biol. Chem.* 289: 2043-2054.
- Denamur, S., et al. 2016. Subcellular mechanisms involved in apoptosis induced by aminoglycoside antibiotics: insights on p53, proteasome and endoplasmic reticulum. *Toxicol. Appl. Pharmacol.* 309: 24-36.
- Zhang, W., et al. 2017. Piccolo mediates EGFR signaling and acts as a prognostic biomarker in esophageal squamous cell carcinoma. *Oncogene* 36: 3890-3902.
- Álvarez-Arellano, L., et al. 2018. Autophagy impairment by caspase-1-dependent inflammation mediates memory loss in response to β -Amyloid peptide accumulation. *J. Neurosci. Res.* 96: 234-246.
- Chen, G., et al. 2019. VHL regulates NEK1 via both HIF-2 α pathway and ubiquitin-proteasome pathway in renal cancer cell. *Biochem. Biophys. Res. Commun.* 509: 797-802.
- Zhang, Y., et al. 2020. Ubiquitination of P53 by E3 ligase MKRN2 promotes melanoma cell proliferation. *Oncol. Lett.* 19: 1975-1984.


 CONJUGATES

See **Ubiquitin (P4D1): sc-8017** for Ubiquitin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.