

## Rabbit polyclonal antibody to Ubiquitin: Whole serum

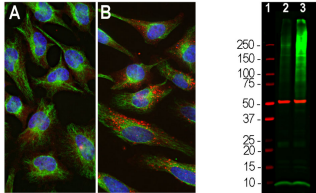
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| <b>Catalogue No.:</b>    | R-1405-50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Description:</b>      | Ubiquitin is a highly conserved 76 amino acid protein with an estimated molecular weight of 8.56 kDa which has a central role in regulated protein degradation. It is a protein modifier which can be covalently attached to target lysines either as a monomer or as a lysine-linked polymer. Several types of polymeric chains can be formed depending on the lysine used for the assembly. Attachment to proteins as a polymer leads to their degradation by the 26S proteasome; a complex, multicatalytic cytosolic and nuclear protease. Attachment to proteins as a monomer or as an alternatively linked polymer does not lead to proteasomal degradation and may be required for numerous functions, including maintenance of chromatic structure, regulation of gene expression, stress response, ribosome biogenesis and DNA repair. Ubiquitin is synthesized as a polyubiquitin precursor with exact head to tail repeats, the number of repeats of which differ between species and strains. In some species there is a final amino-acid after the last repeat, here in bovine a Cys. Some ubiquitin genes contain a single copy of ubiquitin fused to a ribosomal protein (either L40 or S27a). |
| <b>Batch No.:</b>        | See product label                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Unit size:</b>        | 50 uL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Antigen:</b>          | Glutaraldehyde cross-linked ubiquitin.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Antibody Type:</b>    | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Other Names:</b>      | RPS27A; UBA52; UBB; UBC; Polyubiquitin-B; Polyubiquitin-C;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Accession:</b>        | P0CG47 UBB_HUMAN;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Produced in:</b>      | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Purity:</b>           | Antiserum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Applications:</b>     | Western Blotting (WB) and Immunocytochemistry (ICC). A dilution of 1:5,000 - 1:10,000 is recommended for WB. A dilution of 1:500-1,000 is recommended for ICC. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Specificity:</b>      | The specificity of this antibody has been confirmed by WB. This antibody detects ~8.5 kDa Ubiquitin.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Species Against:</b>  | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Antibody Against:</b> | Ubiquitin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Cross-reactivity:</b> | Rat and mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Form:</b>             | Lyophilised                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Reconstitution:</b>   | Reconstitute in 50 uL sterile distilled water. Centrifuge to remove any insoluble material.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Storage:</b>          | After reconstitution of lyophilised antibody, aliquot and store at -20C for a higher stability. Avoid freeze-thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Expiry Date:</b>      | 12 months after purchase                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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Left: Immunofluorescent analysis of HeLa cells stained with rabbit antibody to ubiquitin (red, 1:1,000) by Immunocytochemistry. Cells were co-stained with chicken antibody to vimentin (C-1409-50, green, 1:10,000). Blue: DAPI nuclear stain. [A] Control HeLa cells maintained in normal medium; [B] HeLa cells treated with 10  $\mu$ M of the proteasome inhibitor lactacystin (Lc) for 24 hours. Proteasomal inhibition leads to formation of strongly ubiquitin positive cytoplasmic inclusions [B]. Note the diffuse cytoplasmic ubiquitin staining in control cells [A] and well-defined ubiquitin positive inclusions in the Lc treated cells [B]. Right: Western blot analysis of HEK293 cell lysates using rabbit antibody to ubiquitin (green, 1:5,000). [1] protein standard, [2] cells maintained in normal medium, [3] cells treated with proteasome inhibitor lactacystin (Lc) at 10  $\mu$ M for 16 hours. The blot was simultaneously probed with a mouse antibody to beta-tubulin as loading control (red, lanes 2 and 3). The smear detected above the 200 kDa standard represents accumulations of ubiquitinated proteins in the Lc-treated cells. The prominent band at  $\sim$ 8 kDa corresponds to monoubiquitin.

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