32-5177: Recombinant Human Ubiquitin Gly76 to Ala76 mutation

Alternative Name : Ubiquitin,Ribosomal Protein S27a,CEP80,UBA80,UBCEP1,UBCEP80,HUBCEP80,RPS27A,Ubiquitin G76A.

Description

Source : Escherichia Coli. Recombinant human ubiquitin featuring a Gly76 to Ala76 mutation that, by inhibiting the ubiquitin hydrolases, prevents the removal of ubiquitin from protein ubiquitin conjugates. Ubiquitin G76A is expressed in E.coliand purified by ion-exchange chromatography. The conserved 76 amino acid protein ubiquitin (Ub) regulates a host of intracellular processes through its enzymatic conjugation to other cellular proteins.Ubiquitination occurs through sequential steps catalyzed by activating (E1), conjugating (E2), and ligase (E3) enzymes. The final step results in the formation of an isopeptide bond between Ub's C-terminal glycine residue (G76) and a lysine residue of the target protein, although N-terminal ubiquitination is also known.Outcomes of this modification include destabilization of the conjugated protein, altered protein trafficking and functional modulation.After targeting the protein for specific localizations, ubiquitin is released from the substrate by deubiquitinating enzymes.A mutant ubiquitin, having a Gly to Ala substitution at the C-terminus (G76A ubiquitin) supported several downstream reactions of the proteolytic pathway but inhibits the deubiquitination process.As consequence, the Ub derivative becomes irreversibly conjugated to protein, shifting the equilibrium between the bound and unbound form in the direction of conjugation, at the expense of the free form.

Product Info

Amount :	20 µg
Purification :	Greater than 95% as determined by SDS-PAGE.
Content :	Diluted in PBS plus 5% glycerol.
Storage condition :	Store vial at -20°C to -80°C. When stored at the recommended temperature, this protein is stable for 12 months.Please prevent freeze-thaw cycles.