

Recombinant Human Ubiquitin protein

Catalog No.: RP01354 **Recombinant** **1 Publications**

Sequence Information

Species	Gene ID	Swiss Prot
Human	7314	P0CG47

Tags

N-His

Synonyms

UBB;Polyubiquitin-B; Cleaved into: Ubiquitin

Product Information

Source	Purification
<i>E. coli</i>	> 95% by SDS-PAGE.

Calculated MW **Observed MW**

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

Ubiquitin is a 76 amino acid (aa) protein that is ubiquitously expressed in all eukaryotic organisms. Ubiquitin is highly conserved with 96% aa sequence identity shared between human and mouse Ubiquitin, and 100% aa sequence identity shared between human and yeast Ubiquitin. In mammals, four Ubiquitin genes encode for two Ubiquitin-ribosomal fusion proteins and two poly-Ubiquitin proteins. Cleavage of the Ubiquitin precursors by deubiquitinating enzymes gives rise to identical Ubiquitin monomers each with a predicted molecular weight of 8.6 kDa. Conjugation of Ubiquitin to target proteins involves the formation of an isopeptide bond between the C-terminal glycine residue of Ubiquitin and a lysine residue in the target protein. This process of conjugation, referred to as ubiquitination, is a multi-step process that requires three enzymes: a Ubiquitin-activating (E1) enzyme, a Ubiquitin-conjugating (E2) enzyme, and a Ubiquitin ligase (E3). Ubiquitination is classically recognized as a mechanism to target proteins for degradation and as a result, Ubiquitin was originally named ATP-dependent Proteolysis Factor 1 (APF-1). In addition to protein degradation, ubiquitination has been shown to mediate a variety of biological processes such as signal transduction, endocytosis, and post-endocytic sorting.

Basic Information

Description

Recombinant Human Ubiquitin protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Met1-Gly76) of human Human Ubiquitin (Accession #NP_061828.1) fused with a His tag at the N-terminus.

Bio-Activity

Measured by its binding ability in a functional ELISA. Immobilized Human Fc-gamma RII-a(CD32a) at 1 μg/mL (100 μL/well) can bind IgG1 Fc with a linear range of 0.156-3.47 μg/mL.

Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80°C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.