

## ubiquitin Protein, Human (His)

Cat. No.:	HY-P701839
Synonyms:	UBC; Polyubiquitin-C
Species:	Human
Source:	E. coli
Accession:	P0CG48 (M1-G75)
Gene ID:	7316
Molecular Weight:	

### PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM NH <sub>4</sub> HCO <sub>3</sub> .
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

### DESCRIPTION

#### Background

Ubiquitin, a versatile protein, exists in either covalently attached forms to other proteins or in a free, unanchored state. In its covalently bound state, ubiquitin forms isopeptide bonds with target proteins, presenting as monoubiquitin, polyubiquitin chains linked through different Lys residues, or linear polyubiquitin chains initiated at the Met residue of ubiquitin. The diverse functions of polyubiquitin chains are dictated by the specific Lys residue involved: Lys-6-linked ubiquitin may play a role in DNA repair, Lys-11-linked in endoplasmic reticulum-associated degradation (ERAD) and cell-cycle regulation, Lys-29-linked in proteotoxic stress response and cell cycle, Lys-33-linked in kinase modification, Lys-48-linked in protein degradation via the proteasome, and Lys-63-linked in endocytosis, DNA damage responses, and NF-kappa-B activation. Linear polyubiquitin chains, initiated at Met, are implicated in cell signaling. While ubiquitin typically conjugates to Lys residues, rare instances involve conjugation to Cys or Ser residues. In its free form, unanchored-polyubiquitin contributes to various cellular processes, including the activation of protein kinases and signaling events. Ubiquitin's multifaceted roles underline its significance in orchestrating diverse cellular functions and regulatory pathways.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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