

Product datasheet

Recombinant Human Ubiquitin (mutated K29 + K48 + K63) protein (Chemical Free) ab81669

Overview

Product name	Recombinant Human Ubiquitin (mutated K29 + K48 + K63) protein (Chemical Free)
Protein length	Full length protein

Description

Nature	Recombinant
Source	Escherichia coli

Amino Acid Sequence

Accession	P0CG47
Species	Human
Molecular weight	9 kDa

Specifications

Our [Abpromise guarantee](#) covers the use of **ab81669** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Conjugation SDS-PAGE
Purity	> 95 % SDS-PAGE.
Form	Lyophilised
Additional notes	Mutation of lysines 29, 48 and 63 to arginine renders ubiquitin unable to form poly-ubiquitin chains via the major known poly-ubiquitination sites. The ubiquitin triple mutant can form an E1-catalyzed active thioester at the C-terminus allowing the molecule to be transferred to the lysines of substrate proteins. Ideal for studies of alternate mono-ubiquitination or polyubiquitination sites.

Typical concentrations for non rate-limiting support of in vitro conjugation reactions range from 200 µM-1 mM depending on experimental conditions.

Preparation and Storage

Stability and Storage	Shipped at 4°C. After reconstitution store at -20°C. Avoid freeze / thaw cycles. None
Reconstitution	Soluble and stable in aqueous buffers up to 5 mg/ml.

General Info

Relevance	<p>Function: Ubiquitin exists either covalently attached to another protein, or free (unanchored). When covalently bound, it is conjugated to target proteins via an isopeptide bond either as a monomer (monoubiquitin), a polymer linked via different Lys residues of the ubiquitin (polyubiquitin chains) or a linear polymer linked via the initiator Met of the ubiquitin (linear polyubiquitin chains). Polyubiquitin chains, when attached to a target protein, have different functions depending on the Lys residue of the ubiquitin that is linked: Lys-6-linked may be involved in DNA repair; Lys-11-linked is involved in ERAD (endoplasmic reticulum-associated degradation) and in cell-cycle regulation; Lys-29-linked is involved in lysosomal degradation; Lys-33-linked is involved in kinase modification; Lys-48-linked is involved in protein degradation via the proteasome; Lys-63-linked is involved in endocytosis, DNA-damage responses as well as in signaling processes leading to activation of the transcription factor NF-kappa-B. Linear polymer chains formed via attachment by the initiator Met lead to cell signaling. Ubiquitin is usually conjugated to Lys residues of target proteins, however, in rare cases, conjugation to Cys or Ser residues has been observed. When polyubiquitin is free (unanchored-polyubiquitin), it also has distinct roles, such as in activation of protein kinases, and in signaling. Similarity: Belongs to the ubiquitin family. Contains 3 ubiquitin-like domains.</p>
Cellular localization	Cell Membrane, Cytoplasmic and Nuclear

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