

Product datasheet

Recombinant Human Ubiquitin (mutated K6 + K11 + K27 + K33 + K48 + K63) protein (Chemical Free) ab80819

Overview

Product name	Recombinant Human Ubiquitin (mutated K6 + K11 + K27 + K33 + K48 + K63) protein (Chemical Free)
Protein length	Full length protein

Description

Nature	Recombinant
Source	Escherichia coli

Amino Acid Sequence

Accession	P62988
Species	Human
Molecular weight	9 kDa
Tags	His tag N-Terminus

Specifications

Our [Abpromise guarantee](#) covers the use of **ab80819** 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	This ubiquitin mutant contains only a single lysine, K29, with all other lysines mutated to arginine. This mutation renders ubiquitin able to form poly-ubiquitin chains with other ubiquitin molecules only via the K29 lysine. Typical concentrations for non rate-limiting support of <i>in vitro</i> 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. Store at -20°C after solubilization in desired buffer. Avoid multiple freeze/thaw cycles.

General Info**Relevance**

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.

Cellular localization

Cell Membrane, Cytoplasmic and Nuclear

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