

Product Name: Ubiquitin K-Only Mutant Proteins Set

Product Code: TPS-110

Quantity: 9 x 150 µg

FOR RESEARCH USE ONLY (RUO)

Verified Applications / Usage

Recombinant Ubiquitin is activated for use *in vitro* by Recombinant Ubiquitin Activating Enzyme 1 (UBA1). This initial event in the ubiquitin-proteasome cascade requires Mg-ATP and ubiquitin. Appropriate protein concentrations are specific to the application.

Physical Characteristics

Species: Human

Source: *E. coli* BL21

Tags:

Ubiquitin, KX-Only: Untagged

Ubiquitin, NoK: Untagged

Ubiquitin, WT: Untagged

Predicted MW (kDa):

Ubiquitin, KX-Only: 8.7 kDa

Ubiquitin, NoK: 8.7 kDa

Ubiquitin, WT: 8.6 kDa

Purity: 90-95 %

Concentration: 400 µM (for each)

Formulation: 10 mM HEPES, pH 7.6

Shipping: The product is shipped with dry ice. Upon receipt, store it immediately at the temperature recommended below.

Stability/Storage: Use a manual defrost freezer and avoid repeated freeze-thaw cycles. Store ≤ -70°C (stable for 24 months from date of receipt).

Related Products

TUB-037: Ubiquitin, Untagged

TUB-078: Ubiquitin, NoK

TUB-100: Ubiquitin, K6 Only

TUB-101: Ubiquitin, K11 Only

TUB-102: Ubiquitin, K27 Only

TUB-103: Ubiquitin, K29 Only

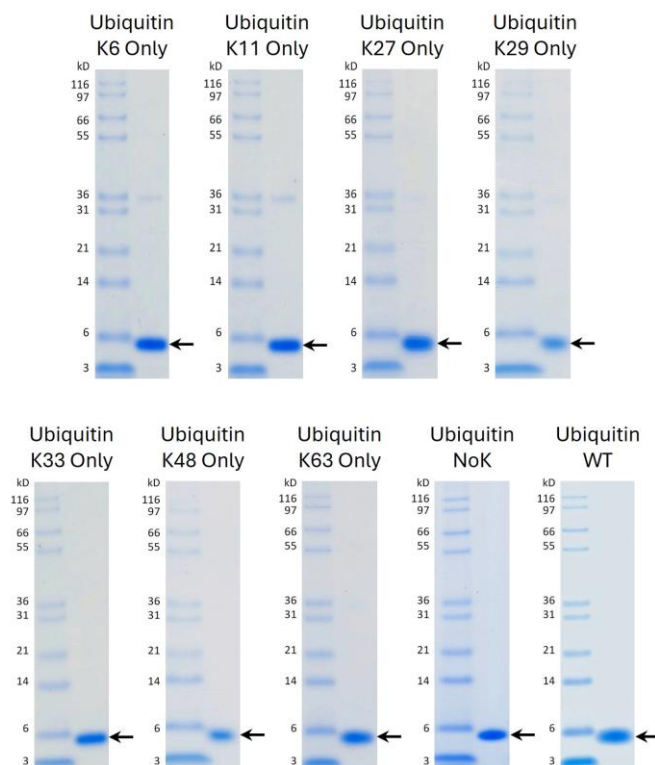
TUB-104: Ubiquitin, K33 Only

TUB-105: Ubiquitin, K48 Only

TUB-106: Ubiquitin, K63 Only

Quality Assurance

Purity & SDS-PAGE



2 µg of each Ubiquitin K-Only mutant, Ubiquitin NoK, & Ubiquitin WT run on 4-12% SDS-PAGE gel under reducing conditions, then visualized with Colloidal Coomassie Blue Stain.

Activity Assay

Verified in Ubiquitin Charging Assay.

Background

Description

The Ubiquitin K-Only Mutant Proteins Set contains i) 7 mutant ubiquitin proteins in which only one canonical lysine (K6, K11, K27, K29, K33, K48, or K63) is present while all others are mutated to arginine, ii) a lysine-null ubiquitin mutant (Ubiquitin, NoK), and iii) wild-type ubiquitin (Ubiquitin, WT). This set contains 150 µg of each of the 9 proteins. These mutants restrict polyubiquitin chain formation to a single linkage type, enabling direct analysis of E2/E3 linkage specificity and ubiquitin chain architecture in ubiquitylation assays.

Protein Sequences

Ubiquitin, Untagged

MQIFVKTTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQRLLFAGKQLEDGRTLSDYNIQK
ESTLHLVLRRLRGG

Ubiquitin, NoK

MQIFV**R**TTLTG**R**TITLEVEPSDTIENV**R**A**R**IQD**R**EGIPPDQQRLLFAG**R**QLEDGRTLSDYNIQ**R**
ESTLHLVLRRLRGG

Ubiquitin, K6 Only

MQIFVKTTLTG**R**TITLEVEPSDTIENV**R**A**R**IQD**R**EGIPPDQQRLLFAG**R**QLEDGRTLSDYNIQ**R**
ESTLHLVLRRLRGG

Ubiquitin, K11 Only

MQIFV**R**TTLTGKTITLEVEPSDTIENV**R**A**R**IQD**R**EGIPPDQQRLLFAG**R**QLEDGRTLSDYNIQ**R**
ESTLHLVLRRLRGG

Ubiquitin, K27 Only

MQIFV**R**TTLTG**R**TITLEVEPSDTIENVK**A**RIQD**R**EGIPPDQQRLLFAG**R**QLEDGRTLSDYNIQ**R**
ESTLHLVLRRLRGG

Ubiquitin, K29 Only

MQIFV**R**TTLTG**R**TITLEVEPSDTIENV**R**A**K**IQD**R**EGIPPDQQRLLFAG**R**QLEDGRTLSDYNIQ**R**
ESTLHLVLRRLRGG

Ubiquitin, K33 Only

MQIFV**R**TTLTG**R**TITLEVEPSDTIENV**R**A**R**IQDKEGIPPDQQRLLFAG**R**QLEDGRTLSDYNIQ**R**
ESTLHLVLRRLRGG

Ubiquitin, K48 Only

MQIFV**R**TTLTG**R**TITLEVEPSDTIENV**R**A**R**IQD**R**EGIPPDQQRLLFAGKQLEDGRTLSDYNIQ**R**
ESTLHLVLRRLRGG

Ubiquitin, K63 Only

MQIFV**R**TTLTG**R**TITLEVEPSDTIENV**R**A**R**IQD**R**EGIPPDQQRLLFAG**R**QLEDGRTLSDYNIQK
ESTLHLVLRRLRGG