Product Name: Ubiquitin K→R Mutant Proteins Set

Product Code: TPS-109

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, KXR: Untagged
Ubiquitin, NoK: Untagged
Ubiquitin, WT: Untagged

Predicted MW (kDa):
Ubiquitin, KXR: 8.6 kDa
Ubiquitin, NoK: 8.7 kDa
Ubiquitin, WT: 8.6 kDa

Purity: 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-092: Ubiquitin, K6R

TUB-093: Ubiquitin, K11R

TUB-094: Ubiquitin, K27R

TUB-095: Ubiquitin, K29R

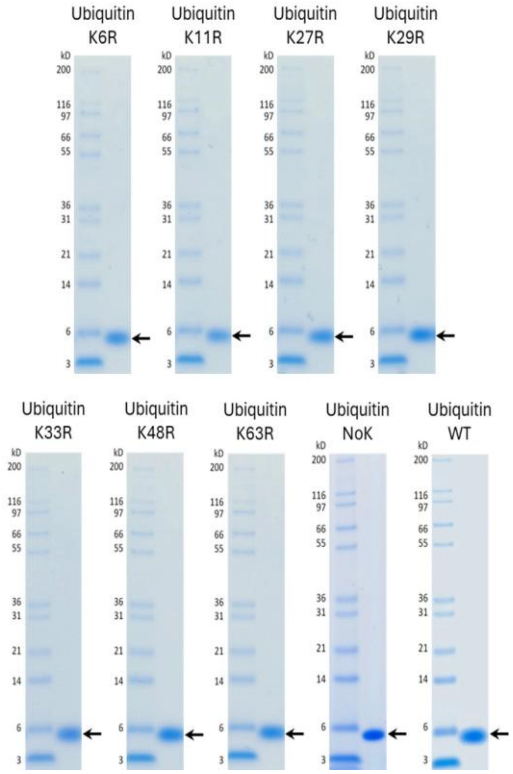
TUB-096: Ubiquitin, K33R

TUB-097: Ubiquitin, K48R

TUB-098: Ubiquitin, K63R

Quality Assurance

Purity & SDS-PAGE



2 µg of each Ubiquitin K→R 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→R Mutant Proteins Set contains i) 7 mutant ubiquitin proteins with individual lysines (K6, K11, K27, K29, K33, K48, K63) 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 reagents enable researchers to investigate ubiquitin linkage formation, E2/E3 enzyme specificity, and ubiquitin chain architecture in *in vitro* ubiquitylation assays.

Protein Sequences

Ubiquitin, Untagged
MQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQRLIFAGKQLEDGRTLSDYNIQK
ESTLHLVLRLRGG

Ubiquitin, NoK
MQIFV**R**TLTG**R**TITLEVEPSDTIENV**R**A**R**IQD**R**EGIPPDQQRLIFAG**R**QLEDGRTLSDYNIQ**R**
ESTLHLVLRLRGG

Ubiquitin, K6R
MQIFV**R**TLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQRLIFAGKQLEDGRTLSDYNIQK
ESTLHLVLRLRGG

Ubiquitin, K11R
MQIFVKTLTG**R**TITLEVEPSDTIENVKAKIQDKEGIPPDQQRLIFAGKQLEDGRTLSDYNIQK
ESTLHLVLRLRGG

Ubiquitin, K27R
MQIFVKTLTGKTITLEVEPSDTIENV**R**AKIQDKEGIPPDQQRLIFAGKQLEDGRTLSDYNIQK
ESTLHLVLRLRGG

Ubiquitin, K29R
MQIFVKTLTGKTITLEVEPSDTIENVKA**R**IQDKEGIPPDQQRLIFAGKQLEDGRTLSDYNIQK
ESTLHLVLRLRGG

Ubiquitin, K33R
MQIFVKTLTGKTITLEVEPSDTIENVKAKIQD**R**EGIPPDQQRLIFAGKQLEDGRTLSDYNIQK
ESTLHLVLRLRGG

Ubiquitin, K48R
MQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQRLIFAG**R**QLEDGRTLSDYNIQK
ESTLHLVLRLRGG

Ubiquitin, K63R
MQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQRLIFAGKQLEDGRTLSDYNIQ**R**
ESTLHLVLRLRGG