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## **UBC Protein (AA 77-152) (His tag)**



#### Overview

Overview	
Quantity:	1 mg
Target:	UBC
Protein Characteristics:	AA 77-152
Origin:	Mouse
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This UBC protein is labelled with His tag.
Application:	ELISA, Crystallization (Crys), SDS-PAGE (SDS), Western Blotting (WB)
Product Details	
Sequence:	MQIFVKTLTG KTITLEVEPS DTIENVKAKI QDKEGIPPDQ QRLIFAGKQL EDGRTLSDYN
	IQKESTLHLV LRLRGG
	Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a
	special request, please contact us.
Characteristics:	Made in Germany - from design to production - by highly experienced protein experts.
	• Mouse Ubc Protein (raised in E. Coli) purified by multi-step, protein-specific process to ensure
	<ul><li>crystallization grade.</li><li>State-of-the-art algorithm used for plasmid design (Gene synthesis).</li></ul>
	State-of-the-art algorithm used for plasmid design (Gene Synthesis).
	This protein is a made to order protein and will be made for the first time for your order. Our
	experts in the lab will ensure that you receive a correctly folded protein.
	The big advantage of ordering our made-to-order proteins in comparison to ordering custom
	made proteins from other companies is that there is no financial obligation in case the protein

cannot be expressed or purified.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

#### Purification:

Two step purification of proteins expressed in bacterial culture:

- 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE.
- 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility:

0.22 µm filtered

Endotoxin Level:

Endotoxin has not been removed. Please contact us if you require endotoxin removal.

Grade:

Crystallography grade

#### Target Details

Target:	UBC
Alternative Name:	Ubc (UBC Products)
Background:	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.
{ECO:0000269 PubMed:19754430}.

Molecular Weight:

9.5 kDa Including tag.

UniProt:

P0CG50

Pathways:

Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling
Pathway, Activation of Innate immune Response, Mitotic G1-G1/S Phases, DNA Replication,
Toll-Like Receptors Cascades, Synthesis of DNA, EGFR Downregulation, Ubiquitin Proteasome
Pathway

### **Application Details**

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a gurantee though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

#### Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.

### Handling

Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)