

Background

Ubiquitin Chains are essential components in the study of protein degradation pathways, protein trafficking, and cellular signaling. These polymeric chains of ubiquitin molecules play critical roles in regulating protein stability, localization, and activity. K33-linked ubiquitination is traditionally associated with the regulation of the innate immune response. In addition, these chain types are implicated in protein stabilization and other non-degradative cellular processes.

K33 Tetra-Ubiquitin is a tetrameric chain composed of wild-type ubiquitin monomers enzymatically linked via isopeptide bonds between lysine 33 (K33) of one ubiquitin and the C-terminal glycine of the next.

Application(s)

- Investigating chain specificity and selectivity
- Examining protein degradation pathways (e.g., proteasomal and autophagic degradation)
- Analyzing ubiquitin-mediated signaling pathways and cellular responses
- Conducting structural studies to elucidate the architecture and dynamics of ubiquitin chains
- Performing screening assays to identify modulators of ubiquitin chain assembly and disassembly

Product Specifications

Tag	None
Purity	≥ 95% by HPLC-MS
Molecular Weight	34678 Da
Quantity	25 µg
Species	Human
Expression System	<i>E. Coli</i>
Physical State	Liquid
Buffer	50 mM Tris, pH 7.5, 0.15 M NaCl
Solubility	>1 mg/ml
Storage	-80° C. Avoid repeated freeze/thaw cycles

References

1. Van Huizen, M. & Kikkert, M. The Role of Atypical Ubiquitin Chains in the Regulation of Antiviral Innate Immune Response. *Front. Cell. Dev. Biol.* **2019**, 7, 392.
2. Tracz, M.; Bialek, W. Beyond K48 and K63: Non-Canonical Protein Ubiquitination. *Cell. Mol. Biol. Lett.* **2021**, 26, 1.