

## K6-Linked Di-Ubiquitin (Phosphorylated)

Cat. # SI0602P

### Background:

Ubiquitin Chains are essential components in the study of protein degradation pathways, protein trafficking, and cellular signaling processes. These polymeric chains of ubiquitin molecules play critical roles in regulating protein stability, localization, and activity. K6-linked ubiquitination is traditionally associated with mitophagy and also a main contributor to the DNA damage response. These chain types are also involved in protein stabilization and other non-degradative processes. Phospho-ubiquitin chains represent a specialized class of polyubiquitin characterized by phosphorylation at Serine 65 and play a central role in mitophagy signaling pathways.

K6 Di-Ubiquitin (phosphorylated) is a dimeric chain of wild-type ubiquitin, wherein ubiquitin monomers are enzymatically linked together via an isopeptide bond between Lysine 6 and the C-terminal Glycine. The chains are then enzymatically phosphorylated at the Ser65 position.

### Application:

- Investigation of phosphoubiquitin chain specificity and selectivity
- Studies on the role of phosphoubiquitin chains in protein degradation pathways (e.g., proteasomal and autophagic degradation)
- Analysis of phosphoubiquitin-mediated signaling pathways and cellular responses
- Structural studies to elucidate the architecture and dynamics of phosphoubiquitin chains
- Screening assays to identify modulators of phosphoubiquitin chain assembly and disassembly processes

### Product Information

<b>Purity:</b>	≥ 95% by HPLC-MS
<b>Molecular Weight:</b>	17219-17299 Da
<b>Physical State:</b>	Liquid, 50 mM Tris, pH 7.5, 0.15 M NaCl
<b>Quantity:</b>	100 µg
<b>Solubility:</b>	>1 mg/mL
<b>Storage:</b>	-80° C. Avoid repeated freeze/thaw cycles

### References

1. Swatek, K.N. & Komander, D. Ubiquitin Modifications. *Cell Res.* **2016**, 26, 399-422.
2. Yau, R. & Rape, M. The increasing complexity of the ubiquitin code. *Nat. Cell. Bio.* **2016**, 18, 579-586.

### Data

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