M1 (linear) Di-Ubiquitin (Phosphorylated)

Cat. # SI0102P

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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. M1-linked ubiquitination is traditionally associated with regulation of NFκB and IFN signalling. Phospho-ubiquitin chains represent a specialized class of polyubiquitin characterized by phosphorylation at Serine 65 and play a central role in mitophagy signaling pathways.

Application(s)

- 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 Specifications

Affinity Tag	None
Purity	≥ 95% estimated by HPLC-MS
Molecular Weight	17.9 KDa
Quantity	25 µg
Species	Human
Expression System	*E. Coli*
Physical State	Liquid
Buffer	50 mM Tris, pH 7.5, 0.15 M NaCl
Solubility	>1 mg/mL
Stability & Storage	-80° C. Avoid repeated freeze/thaw cycles

References

1. Khan, M.; Syed, G.H.; Kim, S-J.; Siddiqui, A. Hepatitis B Virus-Induced Parkin-dependent Recruitment of Linear Ubiquitin Assembly Complex (LUBAC) to Mitochondria and Attenuation of Innate Immunity. PLoS Pathog. 2016, 12, e1005693.
2. Swatek, K.N. & Komander, D. Ubiquitin Modifications. Cell Res. 2016, 26, 399-422.
3. Yau, R. & Rape, M. The increasing complexity of the ubiquitin code. Nature Cell. Bio. 2016, 18, 579-586.