

Phospho-Ubiquitin (pSer65) Biotinylated (all lysines unmodified)

Cat. # SI280

Background: Post-translational modification of proteins by ubiquitin (Ub) is a key regulatory process that impacts almost all cellular functions. Ubiquitylation occurs through isopeptide linkage between the C-terminus of Ub and the ϵ -amino group of a lysine (Lys) residue on the target substrate [1]. Ub itself has seven Lys residues (6, 11, 27, 29, 33, 48, and 63), any of which can participate in further ubiquitylation, generating polyUb chains [2, 3]. Phospho-ubiquitin chains represent a specialized class of polyubiquitin characterized by phosphorylation at Serine 65 and play a central role in mitophagy signaling pathways

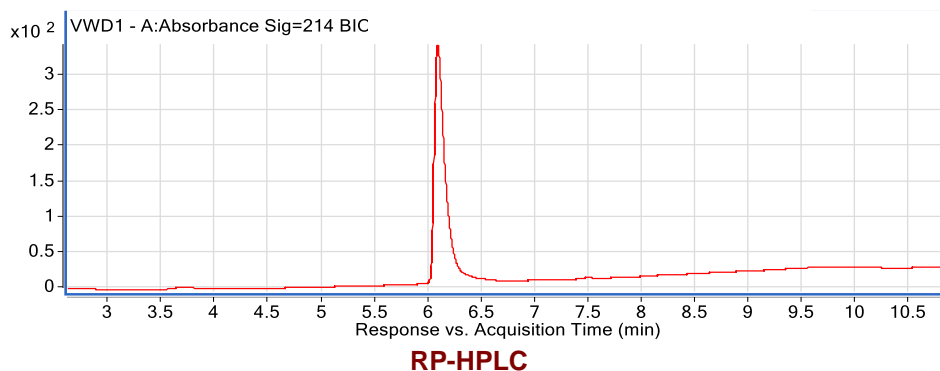
Description LifeSensors' biotinylated ubiquitin carries a single biotin molecule attached at a defined location and unlike other biotinylated ubiquitins, avoids modification of the N-terminus, C-terminus or any of the seven Lys side chains. Therefore, this biotinylated ubiquitin has all lysines available for conjugation and can be incorporated into polyubiquitin chains of any linkage type. Phosphorylation occurs at Ser65.

Application:

- In vitro ubiquitin conjugation, determination of the activity of ubiquitin conjugating enzymes.
- Analysis of phosphor-ubiquitin-mediated signaling pathways and cellular responses
- Structural studies to elucidate the architecture and dynamics of phosphor-ubiquitin chains

Product Information

Purity:	≥ 90% by RP-HPLC
Molecular Weight:	9110.98 Da
Physical State:	Liquid, PBS
Quantity:	100 μ g
Solubility:	≥ 8mg/mL
Storage:	-80° C. Avoid repeated freeze/thaw cycles



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References

1. Pickart, C.M., Mechanisms underlying ubiquitination. *Annu Rev Biochem.* **70**:503-33 (2001).
2. Xu, P. and Peng, J., Characterization of polyubiquitin chain structure by middle-down spectrometry. *Anal Biochem.* **80**:3438-3444 (2008).
3. Pickart, C.M. and Fushman, D., Polyubiquitin chains: polymeric protein signals. *Curr Opin Chem Biol.* **8**:610-616 (2004).

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