

Ubiquitin, TAMRA-labeled (TMR-Ub)

Cat. # SI270T

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]. Monitoring the ubiquitylation of target proteins or the growth of polyubiquitin chains has traditionally been carried out with either radiolabeled or epitope-tagged ubiquitin requiring long and laborious detection methods. Fluorescently labeled ubiquitin provides a rapid, facile technique for studying ubiquitin conjugation in vitro. Unlike others, LifeSensors' TAMRA-labeled ubiquitin carries a single TAMRA molecule attached at a defined location and avoids modification of either the N-terminus or Lys side chains.

Application: In vitro detection of ubiquitin conjugation, determination of the activity of ubiquitin conjugating enzymes

Product Information

Purity: $\geq 95\%$ by RP-HPLC

Molecular Weight: 9133.5 Da

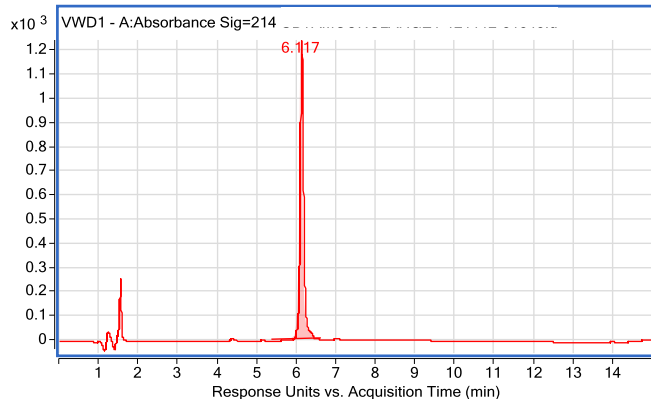
Physical State: Liquid, PBS

Quantity: 100 μ g

Solubility: ≥ 8 mg/mL

Wavelength Maxima: Ex: 540nm, Em: 578nm

Storage: -80° C. Avoid repeated freeze/thaw cycles



RP-HPLC

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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