

UbAlexa-647

Cat. # SI270A

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' Alexa-labeled ubiquitin carries a single Alexa-647 molecule attached at a defined location and avoids modification of either the N-terminus or Lys side chains.

Alternate names: MonoAlexa/UbAlexa

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

Product Information

Purity: >95%

Molecular Weight: 9562 da

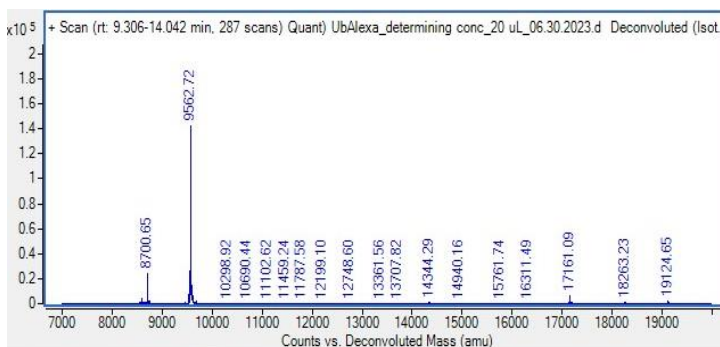
Physical State: Liquid, PBS

Quantity: 100 μ g

Solubility: > 8mg/mL

Wavelength Maxima: Ex: 651 nm, Em: 667 nm

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



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).

All products are for research use only • not intended for human or animal diagnostic or therapeutic uses
Copyright © 2010 LifeSensors, Inc. All Rights Reserved