Europium Cryptate Ubiquitin

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South Bay Bío

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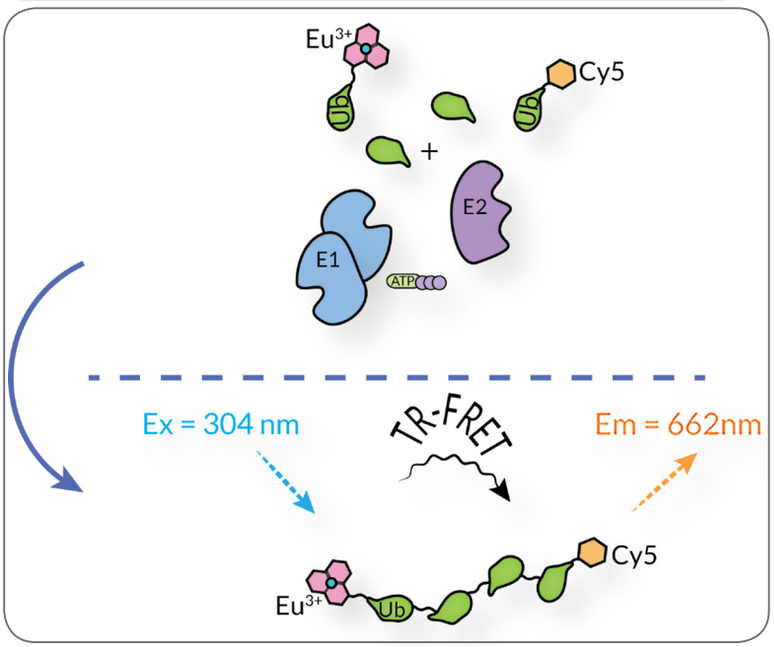
Ubiquitin is a highly conserved protein that plays a major role in the ubiquitination pathway, which is conserved from yeast to mammals. Ubiquitination, the conjugation of ubiquitin to other proteins through a covalent bond between its C-terminal glycine and the 3-amino group of lysine residues or the 3-amino group of an N-terminal methionine onto proteins is essential for many cellular process primarily linked to protein degradation. This process involves three steps with specific groups of enzymes in an ATP depended manner, which are activation with ubiquitin-activating enzymes (E1s), conjugation with ubiquitin-conjugating enzymes (E2s), and ligation with ubiquitin ligases (E3s).

Highly purified recombinant ubiquitin site-specifically labeled with a single Europium Cryptate moiety. All lysines are available along with a fully functional C-terminus, making the Europium Cryptate Ub ideal for chain formation using the the E1 – E2 and E3 conjugation cascade. The Cryptate has an excitation maximum of 304nm and an emission maximum of 620nm.



Product Information

Quantity: 20µg **Molecular Weight:** 9.85 kDa

Concentration: 300 µM, 2.9 mg/mL

Purity: >98% by LCMS

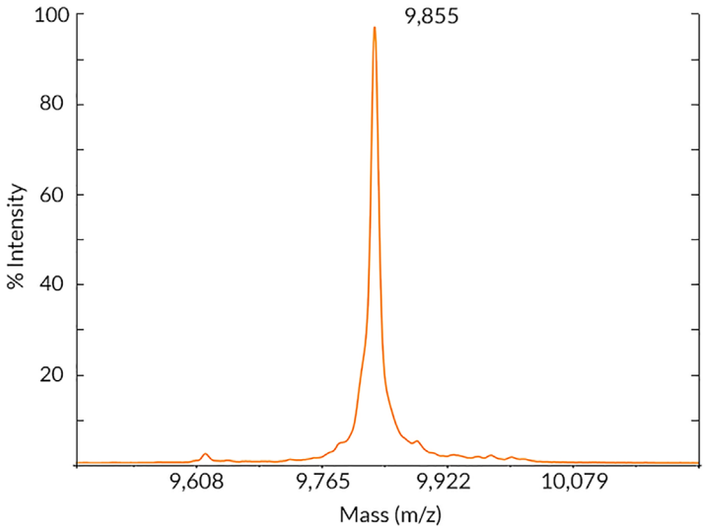
Excitation/Emission = 304nm /620nm

Storage Buffer: 50mM Hepes pH 7.5, 50mM NaCl

Storage: -80C, Avoid multiple freeze / thaw

Quality Control and Performance Data

Mass Spectrometry Data



LCMS. Analysis of Eu^{3+} Cryptate-Ubiquitin using LCMS intact mass determination indicates purity greater than 98%, and a molecular weight of 9,855 daltons.

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References

1) Hemmilä, Ilkka and Stuart Webb. "Time-Resolved Fluorometry: An Overview Of The Labels And Core Technologies For Drug Screening Applications". N.p., 2017. Print.

2) Komander, David and Michael Rape. "The Ubiquitin Code". Annual Review of Biochemistry 81.1 (2012): 203-229. Web. 9 Mar. 2017.

3) Visser, A. J. W. G. et al. "Time-Resolved FRET Fluorescence Spectroscopy Of Visible Fluorescent Protein Pairs". European Biophysics Journal 39.2 (2009): 241-253. Web. 13 Mar. 2017.

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