# Cy5-Ubiquitin

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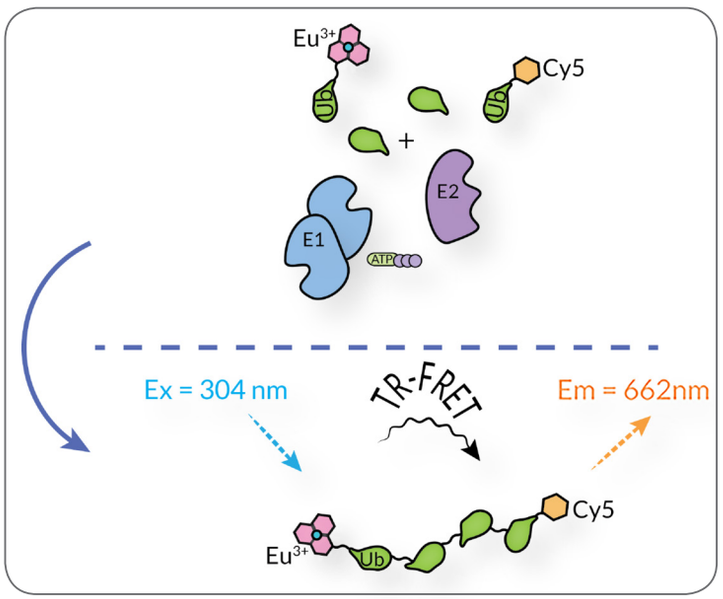
South Bay Bío

## Cy5-Ubiquitin

Ubiquitin is a highly conserved protein that plays a major role in the ubiquitylation pathway, which is conserved from yeast to mammals. Ubiquitylation, 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 protein, which has been labeled with a single Cyanine5 (Cy5) moiety at a specific site that keeps all lysines within the protein available and has a fully functional C-terminus that allows for further conjugation into ubiquitin chains and does not affect or impairs the E1 – E2 and E3 conjugation cascade. Cy5-Ubiquitin has an excitation maximum Ex 646nm and an emission maximum Em 662nm.




## Product Information

**Quantity:** 50µg **Molecular Weight:** 9.3 kDa

**Concentration:** 200 µM, 1.9 mg/mL

**Purity:** >98% by LCMS

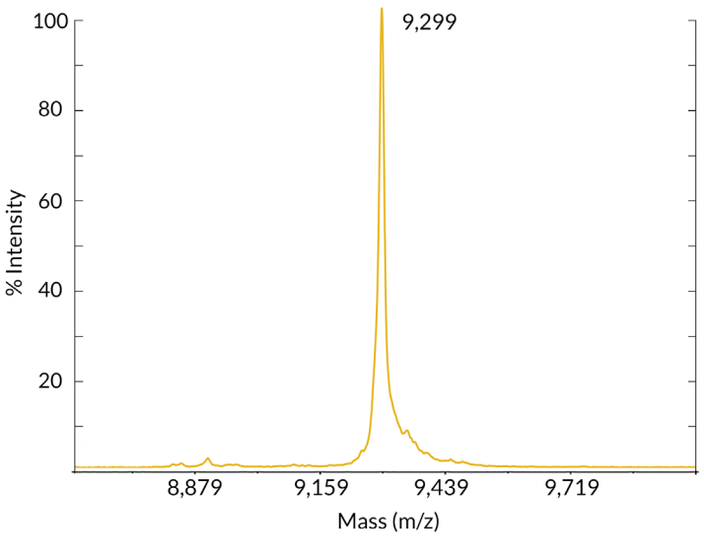
**Excitation/Emission** = 646nm /662nm

**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 Cy5-Ubiquitin using LCMS intact mass determination indicates purity greater than 98%, and a molecular weight of 9,299 daltons.

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## References

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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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