

MATERIAL DATA SHEET

Methylated Ubiquitin-¹³C ¹⁵N, human recombinant Cat. # U-720

Isotopically labeled ubiquitin is useful in determining total cellular concentrations of ubiquitin, or determining the ratio of free- to substrate-bound ubiquitin using the protein standard absolute quantification (PSAQ) or related methods. Reductive methylation of lysine residues renders ubiquitin unable to form poly-ubiquitin chains via lysine linkages with other Ub molecules. Methylated Ub can form an E1-catalyzed active thioester at the C-terminus allowing the molecule to be transferred to the lysines of substrate proteins in a mono-ubiquitinated or multi-mono-ubiquitinated fashion.

Product Information

Quantity: 100 μg, lyophilized powder

MW: 9255.5 Da (> 95% labeled)

Solubility: Aqueous solutions up to 50 mg/ml

Purity: > 95% by SDS-PAGE

Use & Storage

Use: Typical amount for use as an internal recovery standard is approximately 1 µg

per gram of protein lysate

Storage: Lyophilized powder at 4°C. Solubilized stock solution at -20°C.

Avoid multiple freeze/thaw cycles.

Literature

References: Ciechanover A., et al. (1980) <u>J. Biol. Chem.</u> **255:** 7525-7528

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Glickman M.H. and Ciechanover A. (2002) <u>Physiol. Rev.</u> **82**:373-428 Hershko A. and Ciechanover A. (1992) <u>Ann. Rev. Biochem.</u> **61:** 761-807

Kaieser S., et al. (2011) Nature Methods 8: 691-696

Schwartz A.L and Ciechanover A. (1999) <u>Ann. Rev. Med.</u> **50:** 57-74. Wilkinson K.D. and Audhya T.K. (1981) <u>J. Biol. Chem.</u> **256:** 9235-9241

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