

Ubiquilabel™, Ubiquitin [$1\text{-}^{13}\text{C}$ (99%), ^{15}N (98%)]

Cat. # NS104

Background: ^{13}C and ^{15}N , heavy-labeled ubiquitin provides a stable standard for ubiquitin structural study by NMR. The recombinant human ubiquitin is purified from *E.coli* expressing the human ubiquitin gene. The cells are grown in media where the sole nitrogen source is ^{15}N labeled ammonium sulfate and the sole carbon source is ^{13}C glucose, where the carbon at only position 1 of D-Glucose is labeled. The recombinant human ubiquitin is purified without heating by a proprietary procedure that preserves the native structure of the protein. The purified protein is homogenous when analyzed by overloaded SDS gels. The pools of purified protein solution are extensively dialyzed against water and lyophilized.

Application: Heavy-labeled ubiquitin for NMR studies

Product Information

Purity:	98% by RP-HPLC
Protein:	Ubiquitin
Atom% Enrichment:	^{13}C (99%), ^{15}N (98%)
Physical State:	Lyophilized powder
Quantity:	5mg or 10mg
Solubility:	>30mg/ml in aqueous solution
Storage:	-20°C

References

1. Tjandra, N., Feller, S.E., Pastor, R.W. & Bax, A. Rotational diffusion anisotropy of human ubiquitin from ^{15}N NMR relaxation. *J. Am. Chem. Soc.* **117**, 12562-12566 (1995)
2. DiStefano, D.L. & Wand, J.A. Two-dimensional proton NMR study of human ubiquitin: a main chain directed assignment and structure analysis. *Biochemistry* **26**, 7272-7281 (1987).

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