

Ubiquilabel™, Ubiquitin [  $^{13}\text{C}$  (99%),  $^{15}\text{N}$  (98%),  $^2\text{H}$  (70%) ]

Cat. # NS106

**Background:**  $^{13}\text{C}$ ,  $^{15}\text{N}$  and  $^2\text{H}$ , 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  $^{15}\text{N}$  labeled ammonium sulfate, the sole carbon source is  $^{13}\text{C}$  glucose and respective amount of  $^2\text{H}$ . The recombinant human ubiquitin is purified without heating 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**

<b>Purity:</b>	98% by RP-HPLC
<b>Protein:</b>	Ubiquitin
<b>Atom% Enrichment:</b>	$^{13}\text{C}$ (99%), $^{15}\text{N}$ (98%), $^2\text{H}$ (70%)
<b>Physical State:</b>	Lyophilized powder
<b>Quantity:</b>	5mg or 10mg
<b>Solubility:</b>	>30mg/ml in aqueous solution
<b>Storage:</b>	-20°C

**References**

1. Tjandra, N., Feller, S.E., Pastor, R.W. & Bax, A. Rotational diffusion anisotropy of human ubiquitin from  $^{15}\text{N}$  NMR relaxation. *J. Am. Chem. Soc.* **117**, 12562-12566 (1995)

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