



# Stable Isotope Labeled Ubiquitin

Silantes offers high quality stable isotope labeled ubiquitin for monitoring the performance of NMR-spectrometers and for testing new pulse-sequences.

## Stable Isotope Labeled Ubiquitin at Silantes

	Human Ubiquitin
Available isotopic labelings	$^2\text{H}$ , $^{13}\text{C}$ , $^{15}\text{N}$ , $^2\text{H}^{15}\text{N}$ , $^{13}\text{C}^{15}\text{N}$ , $^2\text{H}^{13}\text{C}^{15}\text{N}$
Sequence	MQIFVKLTG KTITLEVEPS DTIENVKAKI QDKEGIPPDQ QRLIFAGKQL EDGRTLSDYN IQKESTLHLV LRLRGG
Molecular weight (of the unlabeled molecule)	8.500 Da

Available as either free protein or in His-tagged form.

### High Quality Standards

We guarantee an isotopic enrichment of > 98 atom %. The isotopic enrichment of the NMR standards is verified by NMR analysis. Figure 1 shows a 2D-NMR spectrum with two superimposed ubiquitin samples: Triple-labeled ubiquitin ( $^2\text{H}^{13}\text{C}^{15}\text{N}$ ) in blue and double-labeled ubiquitin ( $^{13}\text{C}^{15}\text{N}$ ) in red.

NMR-spectra for all other probes are available at [www.silantes-shop.com](http://www.silantes-shop.com).

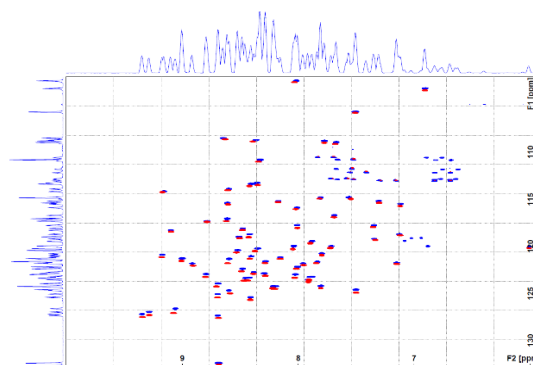


Figure 1: 2D NMR spectra for  $^2\text{H}^{13}\text{C}^{15}\text{N}$ - (blue) and  $^{13}\text{C}^{15}\text{N}$ - (red) labeled ubiquitin. Data of this figure were kindly provided by Dr. Richter in Prof. Dr. Harald Schwalbe Group, Goethe University Frankfurt.

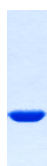


Figure 2:

SDS-PAGE of ubiquitin

For the chemical purity, we guarantee > 95 %. The chemical purity of ubiquitin is verified by electrophoresis for ubiquitin (see figure 2).

### Ready-to-use

Our NMR standards are available in both solid powder form and as concentrated solution (550  $\mu\text{L}$ ) prepackaged in a ready-to-use 5 mm NMR tube.

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