UbiQ
targeting the ubiquitin system

Biotin-Ahx-Ub *(human sequence, synthetic)*

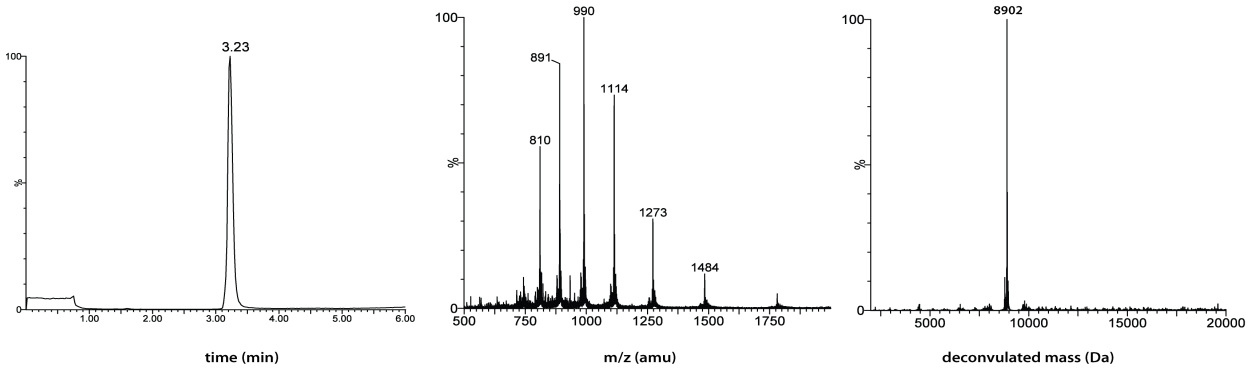
UbiQ code	:	UbiQ-090
Batch #	:	B01072014-001
Amount	:	bulk, lyophilized powder
Purity	:	≥95% by RP-HPLC
Mol. Weight	:	8.90 kDa
Storage	:	upon arrival powder at –20°C; buffered solution at –80°C. Please avoid multiple freeze/thaw cycles.

Productsheet

Background. UbiQ-090 is based on ubiquitin (Ub) which is labeled on the *N*-terminus with biotin; an aminohexanoic acid (Ahx) linker is used to create extra space between the biotin and Ub protein for efficient access of biotin binding entities. It has been prepared by total chemical synthesis[1] and is therefore well-defined in terms of biotinylation site.

Sequence

Biotin-Ahx-MQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQRLIFAGKQLEDGRTLSDYNIQKESTLHLVLRLRGG



LC-MS analysis. Mobile phase A = 1% CH_3CN, 0.1% formic acid in water (milliQ) and B = 1% water (milliQ) and 0.1% formic acid in CH_3CN. XBridge BEH300 C18 5µm 4.6x100mm; column T = 40°C, flow= 0.8 mL/min. Gradient: 30–95% over 3.5 min.

Important: sample preparation

- **dissolve the powder in as little DMSO as possible (20 - 40 mg/mL)**
- **add the DMSO stock to milliQ (please note the order of addition) and mix**
- **buffer the aq. solution as desired (using 1M HEPES or 1M Tris for example)**
- **in general, DMSO concentrations up to 5 vol% are well tolerated by most enzymes.**
- **If required, total removal of DMSO is accomplished by dialysis or spin-filtration (3 kDa cut-off membrane).**

Literature. (1) El Oualid et al. *Angew Chem Int Ed* **2010**, *49*, 10149.

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