UbiQ
targeting the ubiquitin system

Ub K6C *(human sequence, recombinant)*

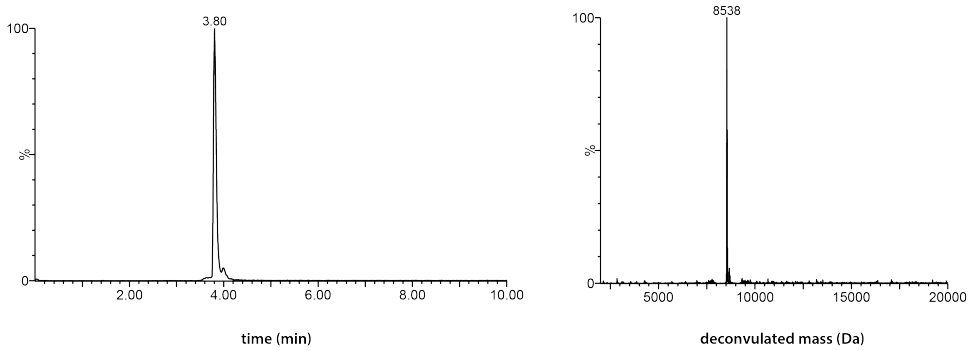
UbiQ code	:	UbiQ-174
Batch #	:	B01092016-001
Amount	:	1.00 mg, lyophilized powder
Purity	:	≥95% by RP-HPLC
Mol. Weight	:	8.54 kDa
Storage	:	powder at –20°C; solution at –80°C. Please avoid multiple freeze/thaw cycles.

Productsheet

Background. Ub K6C (UbiQ-174) is based on the ubiquitin protein (Ub) in which lysine 6 has been mutated to a cysteine residue. Ub Lys-to-Cys mutants can be used to prepare well-defined Ub-chains[1,2] and site-selective functionalized Ub proteins (using thiol reactive moieties).

Sequence

MQIFVCTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQRLIFAGKQLEDGRTLSDYNIQKESTLHLVLRLRGG



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; flow rate = 0.8 mL/min, runtime = 10 min, column T = 40°C. Gradient: 30% ⇨ 60% B over 6.5 min.

Important: sample preparation

- **dissolve the powder in as little DMSO as possible (e.g. 20 - 40 mg/mL)**
- **add the DMSO stock slowly to milliQ (please note the order of addition)**
- **buffer the aq. solution as desired (e.g. 50 mM HEPES pH 8, 100 mM NaCl)**
- **for example, a final buffered stock of 0.5 mg/mL (59 uM) will contain 1.25 vol% DMSO when prepared from a 40 mg/mL DMSO stock.**
- **most DUBs and E1-E2-E3 enzymes tolerate DMSO concentrations up to 5 vol%**
- **if desired, the DMSO can be removed from the buffered stock by dialysis or 3 kDa spin-filters**

Literature. (1) Raasi et al *Methods Mol Biol.* **2005**, *301*, 47. (2) Valkevich et al. *J Am Chem Soc.* **2012**, *134*, 6916.

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