

UbiQ

targeting the ubiquitin system

Biotin-Ahx-SUMO2-PA (human sequence, C48S, synthetic)

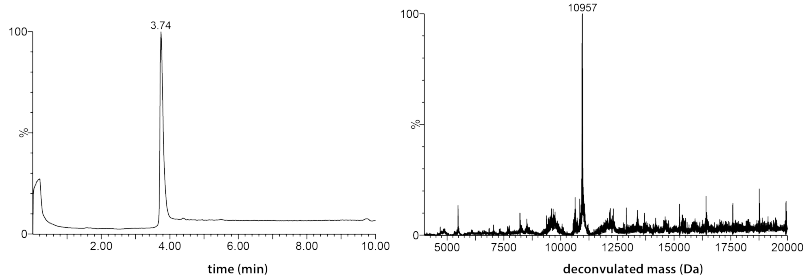
UbiQ code : UbiQ-168
Batch # : B01072016-001
Amount : 50 ug, lyophilized powder
Purity : ≥95% by RP-HPLC
Mol. Weight : 10.96 kDa
Storage : upon arrival, powder at -20°C; solution at -80°C. Please avoid multiple freeze/thaw cycles.

Productsheet

Background. UbiQ-168 is a mechanism activity-based probe for SUMO proteases. It is based on the human SUMO2 sequence (C48S) in which the C-terminal Gly has been replaced by the propargylamide (PA) electrophile. The N-terminus is labeled with biotin and 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 and is therefore well-defined in terms of biotinylation site.

sequence

Biotin-Ahx-MADEKPKKEGVKTENNNDHINLKVAGQDGSVVQFKIKRHTPLSKLMKAYSERQGLSMRQIRFRFDGQPINETDTPAQLEMEDEDTIDVFQQQTG-PA



LC-MS analysis. Mobile phase A = 1% CH₃CN, 0.1% formic acid in water (milliQ) and B = 1% water (milliQ) and 0.1% formic acid in CH₃CN. 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. 40 mg/mL)
- add this DMSO stock slowly to milliQ (please note the order of addition) and buffer as desired.
- a final buffered stock of for example 0.5 mg/mL contains 1.25 vol% DMSO.

Literature. (1) El Oualid et al. *Angew. Chem. Int. Ed.* **2010**, *49*, 10149. (2) Hewing et al. *Nat. Comm.* **2018**, *9*, article number: 1162.