UbiQ
targeting the ubiquitin system

His6-Ahx-Ahx-SUMO2-VPS *(human sequence, C48S, synthetic)*

UbiQ code	:	UbiQ-237
Batch	:	B01112017-001
Amount	:	50 ug, lyophilized powder
Purity	:	≥95% by RP-HPLC
Mol. Weight	:	11.8 kDa
Storage	:	upon arrival, powder at −20°C; solution at −80°C. Please avoid multiple freeze/thaw

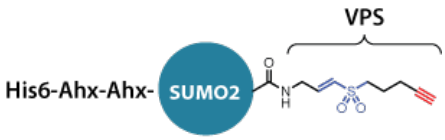
Productsheet

Background. UbiQ-237 is an activity-based probe for SUMO proteases (SENPs), prepared by total chemical synthesis.[1] It contains a C-terminal vinyl pentynyl sulfone (VPS) electrophile (Figure 1) and an *N*-terminal His6 sequence, which allows for sensitive identification or purification by anti-His6 antibodies and/or anti-His6-agarose. The VPS electrophile allows for post-labeling modification of cross-linked UbiQ-237::SENP complexes by click chemistry with, for example, biotin-azide.[2] The His6 tag is separated from the *N*-terminus by two 6-aminohexanoic acid (Ahx) linkers for efficient recognition of the tag.

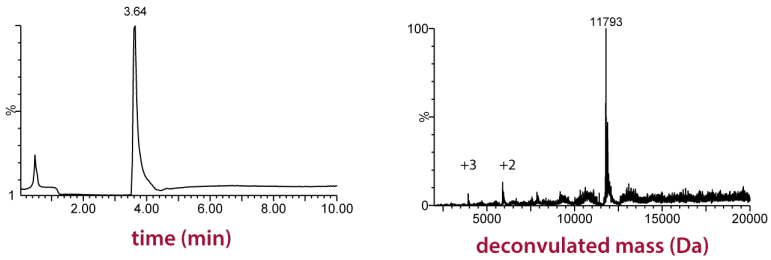
A

HHHHHH-Ahx-Ahx-
MADEKPKEGV KTENNDHINL KVAGQDGSVV
QFKIKRHTPL SKLMKAYSER QGLSMRQIRF
RFDGQPINET DTPAQLEMED EDTIDVFQQQ
TGG-VPS

B



C



D

Figure 1. A: sequence. B: structure. C: LC-MS analysis. Mobile phase A= 1% CH_3CN, 0.1% formic acid in water and B= 1% water 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: 50-90%B over 6.5 min. D: SDS-PAGE analysis. 12% Bolt Bis-Tris gel (LifeTechnologies), 190 V, MES buffer. Staining with InstantBlue.

important: sample preparation

- dissolve the powder in as little DMSO as possible (e.g. 20 mg/mL)
- add this DMSO stock slowly to milliQ (please note the order of addition) and buffer as desired.
- please be aware of background bands due to cross-reactivity of anti-HA antibodies.
- for full experimental details of using these VPS based probes please see reference 2.

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

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