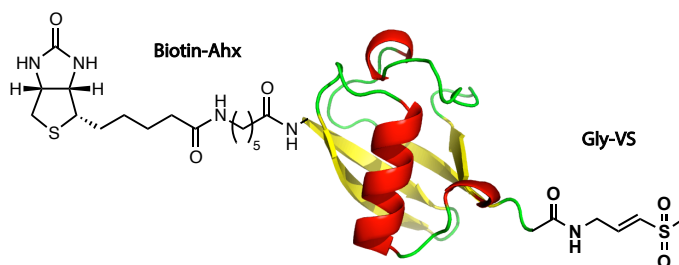


UbiQ

targeting the ubiquitin system



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

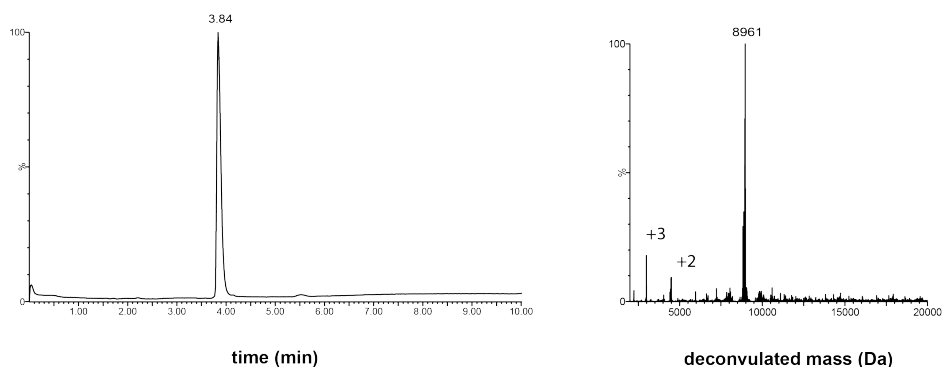
UbiQ code : UbiQ-188
Batch # : B01102016-001
Amount : 50 ug, lyophilized powder
Purity : $\geq 95\%$ by RP-HPLC
Mol. Weight : 8.96 kDa
Storage : upon arrival powder at -20°C ; buffered solution at -80°C .
Please avoid multiple freeze/thaw cycles.

Productsheet

Background. Biotin-Ahx-Ub-VS (**UbiQ-188**) is a potent and specific inhibitor of deubiquitinating enzymes (DUBs) based on a C-terminal electrophilic vinyl sulfone (VS) group.^{1,2} UbiQ-188 can be used for activity profiling experiments and determining DUB inhibitor specificity. It is labeled on the N-terminus with a biotin and an aminohexanoic acid (Ahx) linker is introduced to create extra space between the biotin and Ub protein for efficient access of biotin binding entities. To eliminate Met1 oxidation, Met1 is replaced by norleucine, a well validated Met mimic.³

Sequence

Biotin-Ahx-NleQIFVKLTGKITLEVEPSDTIENVKAKIQDKEGIPPDQQRILFAGKQLEDGRTLSDYNIQKESTLHLVLRRLRG-VS



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 $5\mu\text{m}$ $4.6 \times 100\text{mm}$; flow rate = 0.8 mL/min, runtime = 10 min, column T = 40°C . Gradient: 30% \Rightarrow 60% B over 6.5 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) de Jong et al. *ChemBioChem* **2012**, *13*, 2251. (2) Borodovsky et al. **2001**, *20*, 5187. (3) Xu et al. *RSC Adv* **2016**, *6*, 47926.