

UbiQ

targeting the ubiquitin system

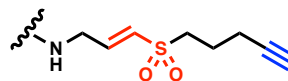


Figure 1. VPS electrophile

Ac-ISG15^{prox}-VPS (mouse sequence, synthetic)

UbiQ code : UbiQ-262
Batch # : B01122018-001
Amount : 50 ug, lyophilized powder
Purity : purified by HPLC (≥95%)
Mol. Weight : 9.37 kDa
Storage : upon arrival, powder at –20°C, solution at –80°C. Please avoid multiple freeze/thaw cycles.

Productsheet

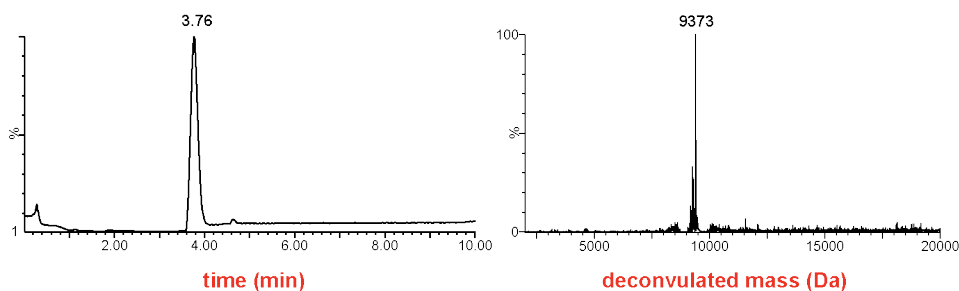
Background. UbiQ-262 is an activity-based probe (ABP) for ISG15 proteases. It is prepared by total chemical synthesis¹ and based on the proximal part of mouse ISG15 (aa 77-155).² To improve stability, Cys77 and Cys144 are replaced by Ser. It contains a C-terminal vinyl pentynyl sulfone (VPS) electrophile (Figure 1) which allows for post-labeling modification of cross-linked [UbiQ-237]:[ISG15 protease] complexes by using click chemistry with for example biotin-azide.³

sequence

AC-SEPLSILVRNERGHSNIYEVFLTQTVDLTKKKVSRREQVHEDQFWLSFEGRPMEDKELLGEYGLKPQSTVIKHLRLRG-VPS

important: sample preparation

- dissolve the powder in as little DMSO as possible (e.g. 20 mg/mL)
- add the DMSO stock to milliQ (please note the order of addition) and mix by vortex
- buffer the aq. solution as desired (using 1M HEPES or 1M Tris for example)
- For full experimental details about using the VPS type of ABP, please see reference 2.



LC-MS. Mobile phase A= 1% aq. CH₃CN and 0.1% aq. formic acid, B= 1% milliQ and 0.1% formic acid in CH₃CN. XBridge BEH300 C18, 3.5 μm, 4.6x100mm; column T= 40°C, flow= 0.8 mL/min. Gradient: 30–60%B over 6.5 min.

Literature. (1) El Oualid et al. *Angew Chem Int Ed* **2010**, *49*, 10149. (2) Basters et al. *Nat Struct Mol Biol.* **2017**, *24*, 270. (3) Hewing et al. *Nat Comm* **2018**, *9*, article number 1162.