UbiQ
targeting the ubiquitin system

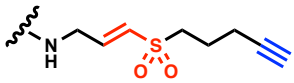


Figure 1. VPS electrophile

Ac-hISG15^{prox}-VPS *(human sequence, proximal domain, synthetic)*

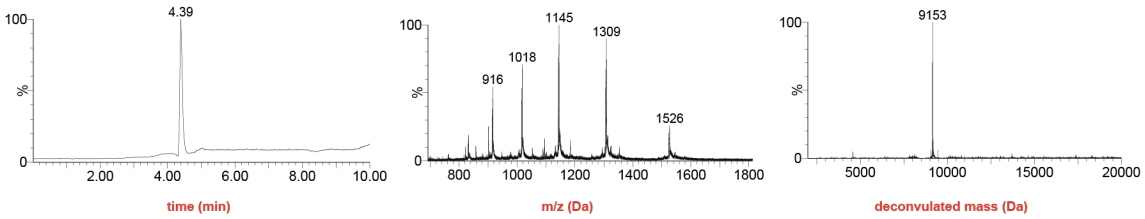
UbiQ code	:	UbiQ-311
Batch #	:	B01065021-001
Amount	:	50 ug, lyophilized powder
Purity	:	≥95%
Mol. Weight	:	9.15 kDa
Storage	:	upon arrival, powder at –20°C, solution at –80°C. Please avoid multiple freeze/thaw cycles.

Productsheet

Background. UbiQ-311 is an activity-based probe (ABP) for ISG15 proteases. It is prepared by total chemical synthesis and based on the proximal domain of human ISG15. It contains a C-terminal vinyl pentynyl sulfone (VPS) electrophile (Figure 1), allowing for post-labeling modification of cross-linked [UbiQ-311]::[ISG15 protease] complexes by using click chemistry with for example biotin-azide.

sequence

Ac-SDEPLSILVRNNKGRSSTYEVRLTQTVAHLKQQVSGLEGVQDDLFWLTFEGKPLEDQLPLGEYGLKPLSTVFMNLRLRG–VPS



LC-MS. Mobile phase A= 1% aq. CH_3CN and 0.1% aq. formic acid, B= 1% milliQ and 0.1% formic acid in CH_3CN. XBridge BEH300 C18, 3.5 µm, 4.6x100mm; column T= 40°C, flow= 0.8 mL/min. Gradient: 20–50%B over 6.5 min.

important: sample preparation

- dissolve the powder in DMSO
- depending on desired final substrate concentration, DMSO stocks may range from 1 mg/mL (103 uM) to 40 mg/mL (4.12 mM)
- add the DMSO stock to milliQ and mix
- next, buffer as desired.
- for full experimental details about using VPS based probes, please see reference 3.

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.

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