

UbiQ

targeting the ubiquitin system

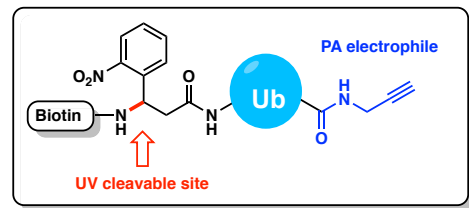


Figure 1. UbiQ-077 = Biotin-ANP-Ub-PA

Biotin-ANP-Ub-PA (human sequence, synthetic)

UbiQ code : UbiQ-077
Batch # : B01082013-001
Amount : 50 ug, lyophilized powder
Purity : $\geq 95\%$ by RP-HPLC and SDS-PAGE
Mol. Weight : 9 kDa
Storage : upon arrival, powder at -20°C and solution at -80°C . Avoid exposure to light and multiple freeze/thaw cycles.

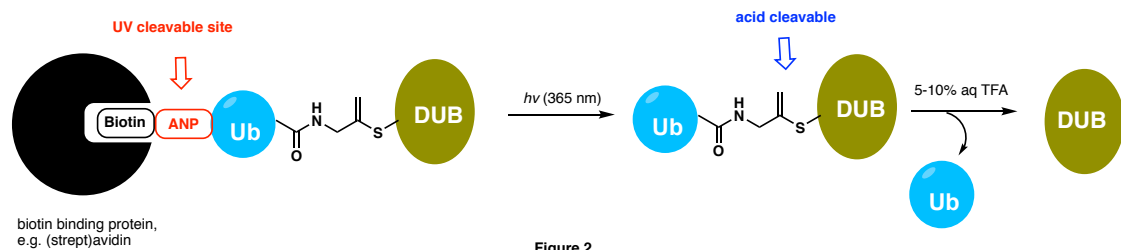
Productsheet

Background. Biotin-ANP-Ub-PA (UbiQ-077, Figure 1) is an activity-based probe for deubiquitinating enzymes (DUBs), which is labeled on the *N*-terminus with biotin. An UV cleavable 3-amino-3-(2-nitrophenyl)propanoic acid (ANP) linker allows for UV mediated cleavage of the biotin tag (Figure 2).¹ UbiQ-077 can be used for activity profiling experiments and determining DUB inhibitor specificity. The PA electrophile introduces two unique capabilities:²

- it forms a covalent linkage with (the active site Cys residue of) a DUB that can be cleaved by acid treatment (5-10% aq. TFA), allowing for proteomic analyses
- it targets all three major DUB families: UCH, USP and OTU.

sequence

Biotin-ANP-MQIFVKTLTGKTTITLEVEPSDTIENVKAKIQDKEGIPPDQQRLLIFAGKQLEDGRTLSDYNIQKESTLHLVLRRLRG-PA



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).
- For detailed experimental conditions please see references 1 and 2.

Literature. (1) (a) Rodenko et al. *Nat Prot* **2006**, 1, 1120. (b) Aoki et al. *Bioorg. Med. Chem.* **2009**, 17, 3405. (2) (a) Ekkebus et al. *J. Am. Chem. Soc.* **2013**, 135, 2867. (b) Sommer et al. *Bioorg. Med. Chem.* **2013**, 21, 2511.