

UbiQ

targeting the ubiquitin system

K11 Di-Ubiquitin VME (human sequence, synthetic)

UbiQ code : UbiQ-082

Batch # : B01112014-001

Amount : 25 ug, lyophilized powder

Purity : $\pm 90\%$ *

Mol. Weight : 17.11 kDa

Storage : upon arrival, store powder at -20°C ; solution at -80°C . Please avoid multiple freeze/thaw cycles.

Productsheet

Background. UbiQ-082 is an activity-based probe for deubiquitinating enzymes (DUBs) based on K11 linked diUb. Here Lys11 has been replaced by a diaminobutyric acid residue equipped with a VME type warhead - the Dab(VME) type of structure is a DUB reactive mimic of the native isopeptidic linked Lys(Gly) residue (Figure 1). DUB activity-based probes can be used for activity profiling experiments and structural studies. Please note that the native distance between the proximal and distal Ub is preserved as much as possible in UbiQ-082.

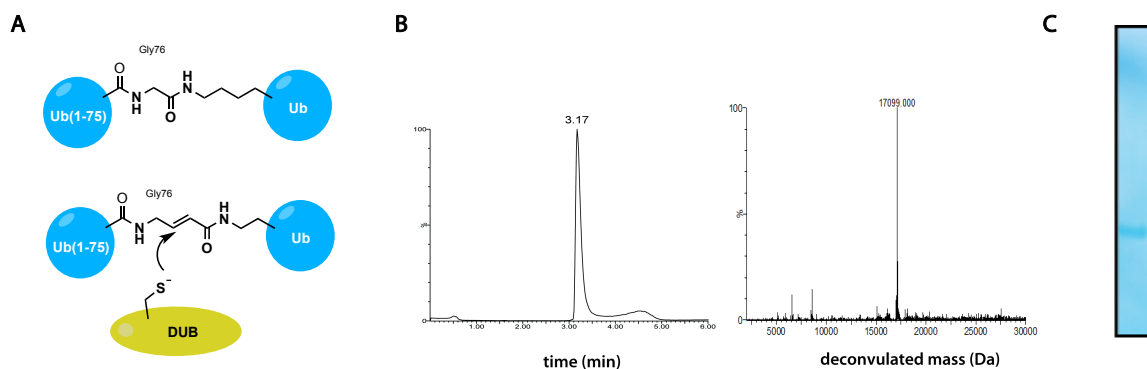


Figure 1. Mode of action diUb VME labeling of DUBs. Top= native diUb, bottom= diUb VME probe. B: LC-MS analysis. Mobile phase A= 1% CH_3CN , 0.1% formic acid in milliQ and B= 1% milliQ and 0.1% formic acid in CH_3CN . XBridge BEH300 C18 $5\mu\text{m}$ $4.6\times 100\text{mm}$; column T= 40°C , flow= 0.8 mL/min. Gradient: 30–95% over 3.5 min. B: SDS-PAGE analysis. 12% Bolt Bis-Tris Plus gel (Life technologies) and MES running buffer. Coomassie G-250 staining.

* Based on SDS-PAGE analysis there is some Ub(1-75) present in the sample but this does not interfere with labeling experiments with DUBs.

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 mix by vortexing
- buffer the aq. stock as desired
- For more details see (open-access) reference 1: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4159580/>

Literature. (1) Mulder & El Oualid et al. *ChemBioChem* **2014**, *15*, 946.