

DUB activity-based probe mix - HA tagged

UbiQ code: UbiQ-L06

Amount : 3 x 50 µg lyophilized powder

Purity : ≥95%

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

Productsheet

Background. UbiQ-L06 is a panel of three activity-based probes for deubiquitinating enzymes (DUBs):

- UbiQ-035= HA-Ahx-Ahx-Ub-VME, batch B01042014-001, MW: 9.91kDa
- UbiQ-078= HA-Ahx-Ahx-Ub-PA, batch B01122020-001, MW: 9.85 kDa
- UbiQ-187= HA-Ahx-Ahx-Ub-VS, batch B01112016-001, MW: 9.93 kDa

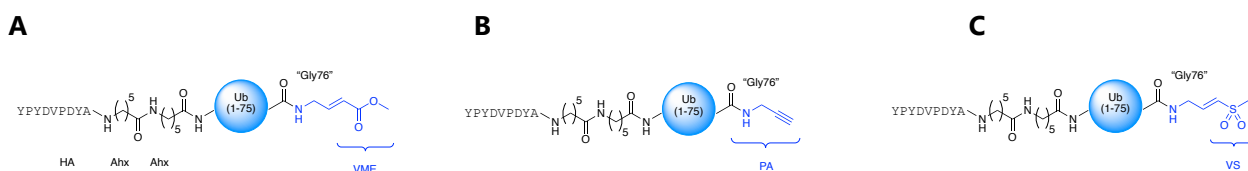


Figure 1. A: probe UbiQ-035. B: probe UbiQ-078. C: probe UbiQ-187 (contains a Met1-to-norleucine mutation).

The probes are based on ubiquitin and labeled on the N-terminus with a HA-tag. The HA peptide sequence (YPYDVDPDYA) is derived from the influenza hemagglutinin protein and allows for the sensitive identification or purification of DUBs since it is specifically recognized by anti-HA antibodies and anti-HA-agarose. The HA tag is separated from the Ub N-terminus by two 6-aminoheptanoic acid (Ahx) linkers for efficient recognition of the tag.

By mixing the three probes, a highly DUB reactive probe mix is obtained that contains the combined reactivity of the PA (propargyl amide), VME (vinyl methyl ester) and VS (vinyl sulfone) electrophiles. As a result the labelling efficiency of the mix is higher than using each probe separately.

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).
- next, buffer as desired.

Literature. (1) El Oualid et al. *Angew Chem Int Ed* **2010**, 49, 10149. (2) Ekkebus et al. *J Am Chem Soc* **2013**, 135, 2867. (2) Sommer et al. *Bioorg Med Chem* **2013**, 21, 2511. (3) de Jong et al. *ChemBioChem* **2012**, 13, 2251. (4) Altun et al. *Chem Biol* **2011**, 18, 1401. (5) Nair et al. *ACS Chem Biol* **2021**, 16, 1615.