UbiQ
targeting the ubiquitin system

Biotin-Ahx-SUMO2-Dha *(human sequence, C48S, synthetic)*

UbiQ code	:	UbiQ-159
Batch #	:	B01042016-001
Amount	:	50 ug, lyophilized powder
Purity	:	≥95% by RP-HPLC
Mol. Weight	:	10.94 kDa
Storage	:	upon arrival, powder at −20°C; solution at −80°C. Please avoid multiple freeze/thaw cycles.

Productsheet

Background. UbiQ-159 is an activity-based probe for SUMO E1, E2 and (HECT/RBR) E3 ligases. It is based on the SUMO2 sequence in which the C-terminal Gly has been replaced by dehydroalanine (Dha) and Cys48 by a Ser residue. The N-terminus is labeled with biotin and a 6-aminohexanoic acid (Ahx) linker is used to create extra space between the biotin and Ub protein for efficient access of biotin binding entities. It has been prepared by total chemical synthesis and is therefore well-defined in terms of biotinylation site. UbiQ-159 is processed in a native manner by SUMO E1, E2 and E3 enzymes and during this process it forms an electrophilic intermediate that can react with catalytic active site Cys residues, thereby creating a covalent bond (Fig. 1).

A

Biotin-Ahx--MADEKPKEGVKTENNDHINLKVAGQDGSVVQFKIKRHTPLSKLMKAY**S**ERQGLSMRQIRFRFDGQPINETDTPAQLEMEDEDTIDVFQQQTG-Dha

B

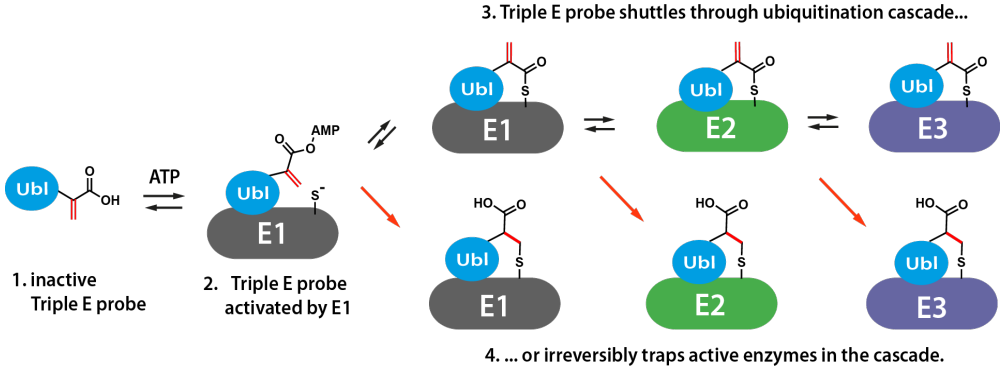

Figure 1. A: Sequence UbiQ-159. B: mode of action.

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
- For full details please see open-access reference 1: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5108872/

Literature. (1) Mulder et al. *Nat Chem Biol* **2016**, *12*, 523.

UbiQ Bio BV
Chamber of Commerce 50023438
VAT NL822502136B01

Science Park 301
1098 XH Amsterdam
The Netherlands

t +31 20 303 1970
e info@ubiqbio.com
i www.ubiqbio.com

Rabobank
IBAN: NL86 RABO 0150658907
BIC/SWIFT: RABONL2U