UbiQ Chains

ALL 8 NATIVELY-LINKED DI-UBIQUITIN CHAINS

UbiQ is the original and only manufacturer of all 8 natively-linked di-ubiquitin chains (table 1,figure 1).[1] Ubiquitin chains are built by forming a native isopeptide bond between the C-terminus of one ubiquitin and one of the seven potential lysines (K6, K11, K27, K29, K33, K48, K63) or the N-terminus (linear chain) of the preceding ubiquitin (figure 2). All chain types have been identified in cells and the type of linkage in a ubiquitin chain regulates distinct signals that affect physiological processes.[2] Therefore access to all these linkages is important in order to elucidate their biological roles and mode of action. UbiQ^{Chains} offers a di-ubiquitin explorer panel that makes it possible to test all linkages in a convenient and affordable way.[3]

Table 1

UbiQ-code	product
UbiQ-013	K6 linked di-ubiquitin
UbiQ-014	K11 linked di-ubiquitin
UbiQ-015	K27 linked di-ubiquitin
UbiQ-016	K29 linked di-ubiquitin
UbiQ-017	K33 linked di-ubiquitin
UbiQ-033	K48 linked di-ubiquitin
UbiQ-034	K63 linked di-ubiquitin
UbiQ-070	linear linked di-ubiquitin
UbiQ-L01	di-ubiquitin explorer panel

Figure 1

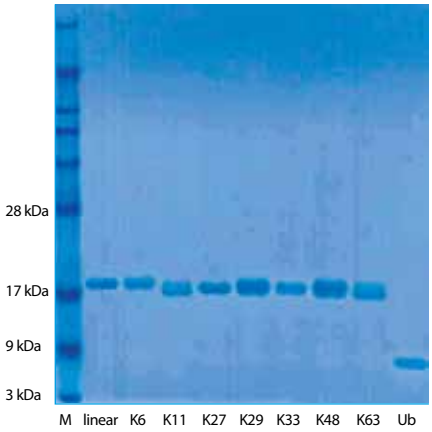
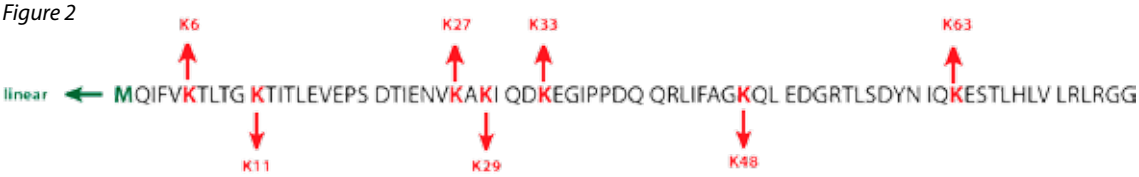


Figure 2



Applications

UbiQ-Chains reagents can be used as a substrate for proteases that cleave the isopeptide linkage between two ubiquitin protein known as deubiquitylases (DUBs). The reagents can also be used to investigate mechanism of binding and recognition by proteins that contain ubiquitin binding motifs.

- DUB specificity
- immunization
- crystallography

Key features

- all linkages available
- native isopeptide bond
- native Ub sequence (i.e. no Lys-to-Arg mutations)

literature

1 El Oualid et al. *Angew Chem Int Ed* **2010**, *49*, 10149.
2 Dikic et al. *Nature Reviews Molecular Cell Biology* **2010**, *10*, 659.
3 (a) Licchesi et al. *Nature Structural & Molecular Biology* **2012**, *19*, 62. (b) Faesen et al. *Chemistry & Biology*, **2011**,*18*, 1550.

→ **for a complete list of references we refer to the product group overview document.**

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UbiQ targeting the ubiquitin system
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