Linear polyubiquitin chains, sampler pack

Sampler pack for use in deubiquitinylating enzyme assays and linear polyubiquitin binding studies.

The post-translational modification of proteins with polyubiquitin chains occurs in a wide range of signalling pathways and is tightly regulated in order to ensure cellular homeostasis. The function, processing and ultimate fate of polyubiquitinylated proteins is thought to be determined by the nature of the linkage between adjacent ubiquitin molecules in the polyubiquitin chain.

In addition to lysine-linked polyubiquitin chains the amino terminus of ubiquitin can be used to form head-to-tail polyubiquitin chains, in which the C-terminal Gly of one ubiquitin is conjugated to the N-terminal Met of an adjacent ubiquitin. Such linear polyubiquitin chains are structurally similar to Lys63-linked polyubiquitin, despite the chemical differences between the two linkage types.

Several ubiquitin polygenes are encoded in eukaryotic cells and undergo post-translational processing to generate the cellular source of free ubiquitin monomers. However, linear polyubiquitin chains,in which the C-terminal Gly of one ubiquitin is conjugated to the N-terminal Met of an adjacent ubiquitin, have been shown to be assembled in vitro by an E3 ligase complex, known as the linear ubiquitin chain assembly complex (LUBAC), and ubiquitin binding domains (UBDs) with a preference for linear polyubiquitin have been identified in a number of proteins. A possible role for linear polyubiquitin modification in NF-κB pathway activation, involving linear polyubiquitinylation of NEMO, has also been reported.

Such observations suggest that linear polyubiquitin modification of proteins may play an important role in cellular processes in addition to that of lysine-linked polyubiquitin protein conjugation.

Citations: 4 View Online »

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BML-UW0825-0001	1Pack

Manuals, SDS & CofA

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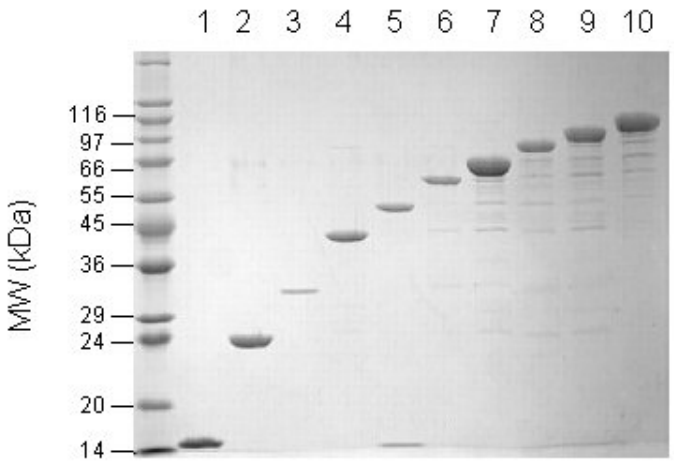

SDS-PAGE comparison of linear polyubiquitin chains (2µg/lane).
Lane 1: Ub_2 (BML-UW0775)
Lane 2: Ub_3 (BML-UW0780)
Lane 3: Ub_4 (BML-UW0785)
Lane 4: Ub_5 (BML-UW0790)
Lane 5: Ub_6 (BML-UW0795)
Lane 6: Ub_7 (BML-UW0800)
Lane 7: Ub_8 (BML-UW0805)
Lane 8: Ub_9 (BML-UW0810)
Lane 9: Ub_{10} (BML-UW0815)
Lane 10: Ub_{11} (BML-UW0820)”””””

Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended. Stable for at least 12 months after receipt when stored at -20°C.
Handling	Avoid freeze/thaw cycles. After opening, prepare aliquots and store at -20°C.
Short Term Storage	-20°C
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application Notes	For use in deubiquitinylating enzyme assays and linear polyubiquitin binding studies.
Concentration	1mg/ml, except Ub4 and Ub6 which are supplied at 0.5mg/ml
Contents	**Name Prod. No. Amount Mol. Weight** Di-ubiquitin (Ub_2) (linear) BML-UW0775 25µg 17.1kDa Tri-ubiquitin (Ub_3) (linear) BML-UW0780 25µg 25.7kDa Tetra-ubiquitin (Ub_4) (linear) BML-UW0785 25µg 34.2kDa Penta-ubiquitin (Ub_5) (linear) BML-UW0790 25µg 42.8kDa Hexa-ubiquitin (Ub_6) (linear) BML-UW0795 25µg 51.3kDa Hepta-ubiquitin (Ub_7) (linear) BML-UW0800 25µg 59.8kDa Octa-ubiquitin (Ub_8) (linear) BML-UW0805 25µg 68.4kDa Nona-ubiquitin (Ub_9) (linear) BML-UW0810 25µg 76.9kDa Deca-ubiquitin (Ub_{10}) (linear) BML-UW0815 25µg 86.5kDa Undeca-ubiquitin (Ub_{11}) (linear) BML-UW0820 25µg 94.0kDa
Formulation	Liquid. In 50mM TRIS, pH 8.0, containing 50mM sodium chloride.
Purity	≥90% (SDS-PAGE)
Source	Produced in *E. coli*.

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