Polyubiquitin chains (Ub_{2-7}), (linear) (recombinant)

Linear Polyubiquitin chains Ub_2-Ub_7

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 Lys^{63}-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 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: 2 View Online »

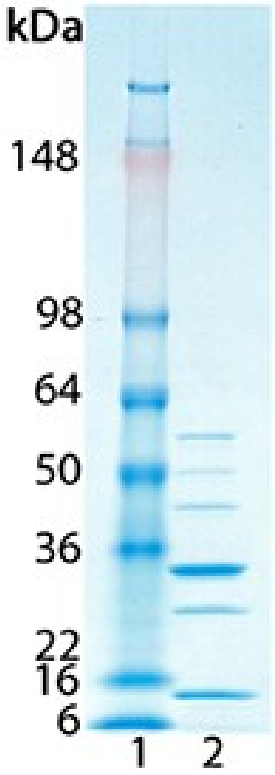
Ordering Information

Order Online »

BML-UW1010-0100	100µg

Manuals, SDS & CofA

View Online »



SDS-PAGE Analysis: Lane 1: MWM; Lane 2: 2.0 µg of purified Linear Polyubiquitin chains (Ub2-7) Prod. No. BML-UW1010.

Handling & Storage

Use/Stability	Stable for at least 1 year after receipt when stored at -20°C.
Handling	Avoid freeze/thaw cycles. After opening, prepare aliquots and store at -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. Suggested uses: 1. Deubiquitinylating enzyme substrates (general/linkage specific). 2. Investigation of polyubiquitin chain recognition by and interaction with ubiquitin binding proteins. 3. Linear polyubiquitin studies.
Formulation	Liquid. In 50mM TRIS-HCl, pH 8.0, containing 50mM sodium chloride.
MW	Ub2: ~17.1kDaUb3: ~25.6kDaUb4: ~34.2kDaUb5: ~42.7kDaUb6: ~51.3kDaUb7: ~59.8kDa
Purity	≥95% (SDS-PAGE)
Purity Detail	Purified by multi-step chromatography.
Source	Produced in *E. coli*.
UniProt ID	P0CG47 (UBB), P0CG48 (UBC)

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