Recombinant Human Linear Tetra-ubiquitin Protein

Cat. No. Ubiquitin-06H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Ub4 Protein without tag was expressed in E. coli.
Species	Human
Source	E.coli
Description	Linear polyubiquitin chains are useful tools for investigating, amongst other things, the specificity and reactivity of deubiquitinylating enzymes (DUBs) and the recognition and interaction of linear polyubiquitin modified proteins with by ubiquitin binding domain (UBDs) containing proteins. 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 Cterminal 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

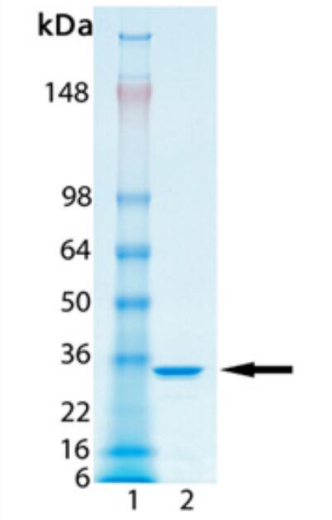
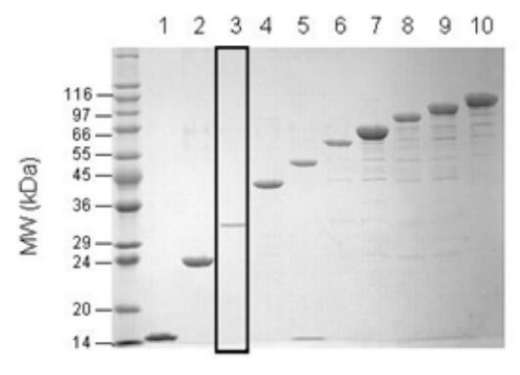
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	ubiquitin binding domains (UBDs) with a preference for linear polyubiquitin have been identified in a number of proteins. A possible role for linear polyubiquitin modification in NF-KB pathway activation, involving linear polyubiquitinylation of NEMO, 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 lysinelinked polyubiquitin protein conjugation.
Form	Liquid
Molecular Mass	34.2 kDa
Purity	≥95% (SDS-PAGE)
Applications	For use in deubiquitinylating enzyme assays and 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.
Stability	Stable for at least 12 months after receipt when stored at -20 centigrade.
Handling	Avoid freeze/thaw cycles. After opening, prepare aliquots and store at -20 centigrade.
Storage	At -20 centigrade.
Storage Buffer	50mM TRIS, pH 8.0, containing 50mM sodium chloride.

GENE INFORMATION

Official Symbol	Ub4

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Synonyms	Ub4; UBC; Ubiquitin C
UniProt ID	Q96C32
SDS-PAGE Analysis	 Lane 1: MW marker Lane 2: 1.0 μg of purified Tetra-ubiquitin (Ub4)
SDS-PAGE comparison of linear polyubiquitin chains (all 2 μg/lane)	

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