Lot # XXXXX

BostonBiochem

MATERIAL DATA SHEET

Biotinylated Tetra-Ub/Ub4 WT Chains (K63-linked)
Cat. # UCB-310

Polyubiquitin chains are composed of ubiquitin monomers that are covalently linked through isopeptide bonds, which typically form between a lysine residue of one ubiquitin molecule and the C-terminal glycine residue of another ubiquitin molecule. Each human ubiquitin monomer is 76 amino acids (aa) in length and shares 96% and 100% aa identity with yeast and mouse ubiquitin, respectively. Seven of the 76 aa in ubiquitin are lysine residues that can participate in polyubiquitin chain formation. Linkage through specific lysine residues is thought to serve as a signal that affects protein degradation, signaling, trafficking, and other cellular processes. Linkage specific polyubiquitin chains are used to investigate mechanisms of chain recognition, binding and hydrolysis by the proteasome, deubiquitinating enzymes, E3 ligases or other proteins that contain ubiquitin-associated domains (UBAs) or ubiquitin-interacting motifs (UIMs). This product is made with wild-type human recombinant ubiquitin and linkage-specific enzymes. These chains are modified with biotin via primary amine coupling. This results in multiple biotinylated species modified at the N-terminus, as well as lysine residues. Biotinylated ubiquitin can be detected using avidin-linked reagents.

Product Information	
Quantity:	25 µg, lyophilized powder
Solubility:	Reconstitute in aqueous buffer at 2 mg/ml
Purity:	> 95% by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue stain.
MW:	34 kDa when unlabeled

Use & Storage	
Use:	Ubiquitin chains vary in length, linkage, and function. Biotinylated, K63-linked tetraubiquitin chains are ideal for investigating ubiquitin-binding proteins and as substrates for ubiquitin-specific isopeptidases. Reaction conditions will need to be optimized for each specific application. IMPORTANT: Heating this product in SDS-PAGE buffer or terminating reactions containing this product with heated SDS-PAGE buffer could lead to unexpected, high apparent molecular weight banding or smearing on gels that is not representative of product purity. For optimal results, we recommend incubation in SDS-PAGE buffer + DTT at <40 °C for 20 minutes prior to gel electrophoresis
Storage:	Solubilized solution at –20°C. Avoid multiple freeze/thaw cycles.

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Literature

References:

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For Laboratory Research Use Only, Not For Use in Humans

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