Lot # XXXXX

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MATERIAL DATA SHEET

Penta-Ub/Ub5 WT Chains (K48-linked)
Cat. # UC-216B

Linkage specific Poly-Ubiquitin chains may be used as a substrate for *in vitro* reactions with deubiquitinating enzymes ("DUB's") that cleave the peptide or isopeptide linkage between adjacent Ubiquitin molecules. Poly-Ubiquitin chains can also be used to investigate mechanisms of binding and recognition between the chains and other proteins that contain Ubiquitin-Associated domains (UBAs), Ubiquitin-interacting motifs (UIMs), ZnF's and/or other Ubiquitin-sensing elements.

K48-linked Penta-Ubiquitin chains are manufactured using recombinant wild-type human Ubiquitin and linkage-specific enzymes. The use of purely enzymatic techniques avoids the potential for contaminating synthetic intermediates. The correctness of linkage and purity of each production lot is assessed using the Absolute Quantitation of Ubiquitin method (Ub-AQUA), an LCMS-based technique that provides extremely accurate information on the composition of Poly-Ubiquitin samples.

Product Information	
Quantity:	25 µg
Stock:	1 mg/ml (23 µM) in sterile, deionized water
Purity:	> 95% by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue stain.
MW:	43 kDa

Use & Storage	
Use:	Ubiquitin chains vary in length, linkage, and function. K48-linked Penta-Ubiquitin 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:	Store at –20°C. Avoid multiple freeze/thaw cycles.

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Literature

References:

Kirkpatrick D.S., *et al.* (2006) Nat Cell Biol. **8(7)**: 700-10

Ordureau, A., *et al.* (2014) Mol. Cell **56(3)**: 360–375

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Phu L., *et al.* (2011) Mol Cell Proteomics **10(5)**: M110.003756

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