
MATERIAL DATA SHEET

Recombinant Di-Ubiquitin/Ub2 (K33)

Cat. # UC-101

With a predicted molecular weight of 17 kDa, Di-Ubiquitin is composed of two Ubiquitin monomers that are covalently linked through an isopeptide bond, which typically form between a lysine residue of one Ubiquitin molecule and the C-terminal glycine residue of another Ubiquitin molecule (1). Each human Ubiquitin monomer is 76 amino acids (aa) in length and shares 96% and 100% aa identity with yeast and mouse Ubiquitin, respectively (2). Ubiquitin has seven lysine residues that can participate in the formation of poly-Ubiquitin chains. The specific lysine residue used in Ubiquitin conjugation is thought to determine the function of poly-ubiquitination in cellular processes such as protein degradation, signaling, and trafficking (3-8).

Linkage specific di-Ubiquitin is a substrate for enzymes that cleave the isopeptide linkage between two Ubiquitin molecules. It can also be used to investigate mechanism of binding and recognition by Ubiquitin-activating (E1) or Ubiquitin-conjugating (E2) enzymes, deubiquitinating enzymes, Ubiquitin ligases (E3), or other proteins that contain Ubiquitin-associated domains (UBAs) or Ubiquitin-interacting motifs (UIMs).

Product Information	
Quantity:	25 µg
MW:	17 kDa
Source:	Chemically Synthesized Accession # P0CG47
Stock:	Lyophilized from a solution in deionized water.
Solubility:	Reconstitute at 2 mg/mL in an aqueous solution.
Purity:	>90%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Use & Storage

Use: Ubiquitin chains vary in length, linkage, and function. K33-linked Di-Ubiquitin Chains (Ub2) 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: Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

Literature

References:

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