

MATERIAL DATA SHEET

Recombinant Human Tri-Ubiquitin/Ub3 Non-hydrolyzable (K48), Agarose Cat. # UCN-217

With a predicted molecular weight of 26 kDa, tri-Ubiquitin chains are composed of three 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 (1). Each human Ubiquitin monomer is 76 amino acids (aa) in length and shares 96% and 100% aa sequence identity with yeast and mouse Ubiquitin, respectively (2). Seven of the 76 aa in Ubiquitin are lysine residues that can participate in poly-Ubiquitin chain formation. Linkage through specific lysine residues is thought to serve as a signal that affects protein degradation, signaling, trafficking, and other cellular processes (3-8).

Linkage specific, non-hydrolyzable tri-Ubiquitin is resistant to the activity of deubiquitinating enzymes (DUB's) that cleave the isopeptide linkage between adjacent Ubiquitin molecules. It can be used to investigate binding interactions between tri-Ubiquitin and proteins that contain elements such as Ubiquitin-associated domains (UBAs) or Ubiquitin-interacting motifs (UIMs). This product may also be useful in exploring the role of unanchored poly-Ubiquitin chains in some signaling pathways.

Product Information

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|------------------|---|
| Quantity: | 100 µl |
| Source: | <i>E. coli</i> -derived Accession # P0CG47 Each Ubiquitin contains a Pro substitution at position 73. |
| Stock: | 100 µl of agarose supplied in a 200 µl total volume of 20% Ethanol. |

Use & Storage

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| Use: | K48-linked Tri-Ub (Ub3) Non-Hydrolyzable Chain Agarose is useful for the enrichment of known Ubiquitin chain-interacting proteins as well as the discovery of novel Ubiquitin chain-interacting proteins. We recommend equilibrating the resin by washing with 10 volumes of your desired aqueous buffer. |
| Storage: | Do not freeze. <ul style="list-style-type: none">• 3 months from date of receipt, 2 to 8 °C as supplied.• 1 month, 2 to 8 °C under sterile conditions after opening. |

Literature

References:

1. Scheffner, M. *et al.* (1995) *Nature* **373**:81.
2. Sharp, P.M. & W.-H. Li (1987) *Trends Ecol. Evol.* **2**:328.
3. Behrends, C. & J.W. Harper (2011) *Nat. Struct. Mol. Biol.* **18**:520.
4. Greene, W. *et al.* (2012) *PLoS Pathog.* **8**:e1002703.
5. Henry, A.G. *et al.* (2012) *Dev. Cell* **23**:519.
6. Tong, X. *et al.* (2012) *J. Biol. Chem.* **287**:25280.
7. Wei, W. *et al.* (2004) *Nature* **428**:194.
8. Zhang, J. *et al.* (2012) *J. Biol. Chem.* **287**:28646.

For research use only. Not for use in humans.