Lot # XXXXX

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MATERIAL DATA SHEET

His6-Ubiquitin Mutant R74, *human recombinant*
Cat. # UM-HR74

Mature forms of Ubiquitin have a highly conserved diglycine motif at the carboxyl terminus which is crucial for activity and recognition in conjugation and deconjugation reactions. The removal of this diglycine peptide (Ubiquitin ending in Arg74) results in an inactive Ubiquitin. This Ubiquitin cannot be activated by the Ubiquitin-activating (E1) enzyme in an ATP-dependent manner, is not capable of subsequent thioester interaction with Ubiquitin-conjugating (E2) enzyme and/or Ubiquitin ligases (E3), and is thus not capable of forming isopeptide bonds or Ubiquitin conjugates. It can be used as a negative control in conjugation reactions, or inbinding studies with E1, E2, E3 and DUB enzymes or other proteins that interact with Ubiquitin via Ubiquitin-associated domains (UBAs) or Ubiquitin-interacting motifs (UIMs). This protein contains an N-terminal His6-tag.

Product Information	
Quantity:	0.1 mg, lyophilized powder
MW:	9.4 kDa
Solubility:	Soluble and stable in aqueous buffers up to 5 mg/ml.
Purity:	> 95% by SDS-PAGE under denaturing conditions and visualized by staining with Coomassie Colloidal Blue.

Use & Storage	
Use:	Recombinant Human Ubiquitin Mutant R74 is unable to be activated by E1 enzymes, making it ideal for use as a negative control for thioester formation. Reaction conditions will need to be optimized for each specific application.
Storage:	Store at -20°C after reconstitution. Avoid multiple freeze/thaw cycles.

Literature

References: Arnason T., *et al.* (1994) Mol. Cell. Biol. **14**:7876-7883
Spence J., *et al.* (1995) Mol. Cell. Biol. **15**:1265-1273

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840 Memorial Drive, Cambridge, MA 02139 Phone: 617-576-2210 FAX: 617-492-3565
www.bostonbiochem.com