

MATERIAL DATA SHEET

Recombinant Human HA Ubiquitin

Cat. # UB-110

Ubiquitin is a 76 amino acid (aa) protein that is ubiquitously expressed in all eukaryotic organisms. Ubiquitin is highly conserved with 96% aa sequence identity shared between human and yeast Ubiquitin, and 100% aa sequence identity shared between human and mouse Ubiquitin. In mammals, four Ubiquitin genes encode for two Ubiquitin-ribosomal fusion proteins and two poly-Ubiquitin proteins. Cleavage of the Ubiquitin precursors by deubiquitinating enzymes gives rise to identical Ubiquitin monomers each with a predicted molecular weight of 8.6 kDa. Conjugation of Ubiquitin to target proteins involves the formation of an isopeptide bond between the C-terminal glycine residue of Ubiquitin and a lysine residue in the target protein. This process of conjugation, referred to as ubiquitination or ubiquitylation, is a multistep process that requires three enzymes: a Ubiquitin activating(E1) enzyme, a Ubiquitin conjugating (E2) enzyme, and a Ubiquitin ligase (E3). Ubiquitination is classically recognized as a mechanism to target proteins for degradation and as a result, Ubiquitin was originally named ATP dependent Proteolysis Factor 1 (APF1) . In addition to protein degradation, ubiquitination has been shown to mediate a variety of biological processes such as signal transduction, endocytosis, and postendocytic sorting . This Nterminal HAtagged Ubiquitin protein allows for the convenient detection or affinity purification of ubiquitinated proteins in vitro. The HA peptide sequence (YPYDVPDYA) is an epitope derived from the influenza Hemagglutinin protein. This tag is specifically recognized by anti HA antibodies and anti HA agarose.

Product Information

Quantity: 1 mg

MW: 9.7 kDa

Source: E. coliderived human Ubiquitin protein Contains an Nterminal HA (YPYDVPDYA) tag

Stock: Lyophilized from a solution in deionized water.

Solubility: Reconstitute at 10 mg/mL in an aqueous solution.

Purity: > 95% by SDS-PAGE

Use: Recombinant Human HA-Ubiquitin can be conjugated to substrate proteins via the subsequent actions of a Ubiquitin activating (E1) enzyme, a Ubiquitin conjugating (E2) enzyme, and a Ubiquitin ligase (E3). Reaction conditions will need to be optimized for each specific application. We recommend an initial Recombinant Human HA-Ubiquitin concentration of 5-50 μ M.

Storage: Use a manual defrost freezer and avoid repeated freeze thaw cycles.
24 months from date of receipt, -20 to -70 °C as supplied.
6 months, -20 to -70 °C under sterile conditions after reconstitution.