

Deubiquitinating **enzymes** (DUBs), also known as deubiquitinating peptidases, deubiquitinating isopeptidases, deubiquitinases, ubiquitin proteases, ubiquitin hydrolases, ubiquitin isopeptidases, are a large group of proteases that cleave ubiquitin from proteins.

Ubiquitin is attached to proteins in order to regulate the degradation of proteins via the proteasome and lysosome; coordinate the cellular localization of proteins; activate and inactivate proteins, and modulate protein-protein interactions.[3][4][5] DUBs can reverse these effects by cleaving the peptide or isopeptide bond between ubiquitin and its substrate protein. In humans, there are nearly 100 DUB genes, which can be classified into two main classes: cysteine proteases and metalloproteases. The cysteine proteases comprise ubiquitin-specific proteases (USPs), ubiquitin C-terminal hydrolases (UCHs), Machado-Josephin domain proteases (MJDs), and ovarian tumor proteases (OTU). The metalloprotease group contains only the Jab1/Mov34/Mpr1 Pad1 N-terminal+ (MPN+) (JAMM) domain proteases.

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