Recombinant UBP14 protein (His tag)

Catalog Number	540054
Synonyms	Deubiquitinating enzyme 14; Ubiquitin thioesterase 14; Ubiquitin-specific-processing protease 14
Species	Human
Expression System	E. coli
Accession	P54578
Molecular Weight	Predictes a molecular mass of 57.73 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 62 kDa band.

Product Information

Sequence Region	1-494
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-494 aa (P54578) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Ubiquitin Carboxyl-Terminal Hydrolase 14 (USP14) Fragment (residues 1-494) is a high-purity protein encompassing the complete ubiquitin-like and USP domains. This fragment serves as an essential tool for investigating deubiquitinase activity, proteasome regulation, and ubiquitin recycling mechanisms in cellular processes. Ubiquitin carboxyl-terminal hydrolase 14 (USP14) is a proteasome-associated deubiquitinase that plays a critical role in ubiquitin homeostasis by releasing ubiquitin from proteasome-targeted substrates. It functions as a reversible proteasome subunit and is essential for the degradation of key proteins such as the chemokine receptor CXCR4, influencing cell chemotaxis. USP14 also acts as a physiological inhibitor of endoplasmic reticulum-associated degradation (ERAD) under non-stressed conditions and is indispensable for synaptic development at neuromuscular junctions. Additionally, it stabilizes the viral DNA sensor CGAS to support innate immune defense and regulates histone methylation by inhibiting selective autophagic degradation of KDM4D. Located primarily in the cytoplasm and peripherally associated with the cell membrane, USP14 is a multifunctional enzyme with significant implications in protein degradation, immune response, and neuronal function.