Recombinant OTUD3 protein (His tag)

Catalog Number	540472
Species	Human
Expression System	E. coli
Accession	Q5T2D3
Molecular Weight	Predictes a molecular mass of 32.59 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 36 kDa band.

Product Information

Sequence Region	1-273
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 1-273 aa (Q5T2D3) 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 OTU domain-containing protein 3 (OTUD3) fragment (amino acids 1-273) - a high-purity human deubiquitinating enzyme fragment ideal for studying Lys-6 and Lys-11-linked polyubiquitin hydrolysis and metabolic regulation mechanisms. OTUD3 is a crucial deubiquitinating enzyme that specifically hydrolyzes Lys-6- and Lys-11-linked polyubiquitin chains, including heterotypic and homotypic variants. This enzyme plays a vital role in energy metabolism regulation, where glucose and fatty acids trigger its nuclear translocation via CBP-dependent acetylation. Within the nucleus, OTUD3 deubiquitinates and stabilizes the PPARD nuclear receptor, thereby controlling gene expression involved in glucose/lipid metabolism and oxidative phosphorylation. Additionally, OTUD3 functions as a negative regulator of ribosome quality control by deubiquitinating 40S ribosomal proteins RPS10/eS10 and RPS20/uS10, counteracting ZNF598-mediated 40S ubiquitination. The protein exhibits dynamic subcellular localization, residing in both cytoplasm and nucleus, with nuclear translocation promoted by glucose or fatty acid stimulation through acetylation mechanisms.