Recombinant RWDD3 protein (His tag)

Catalog Number	539299
Synonyms	RWD domain-containing sumoylation enhancer; RSUME
Species	Human
Expression System	E. coli
Accession	Q9Y3V2
Molecular Weight	Predictes a molecular mass of 32.20 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 34 kDa band.

Product Information

Sequence Region	1-267
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 1-267 aa (Q9Y3V2) 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 RWD Domain-Containing Protein 3 (RSUME) Fragment (aa 1-267) is a high-purity protein designed for studying SUMO conjugation enhancement. This fragment includes the complete RWD domain, making it an essential tool for investigating domain-specific interactions with UBE2I/UBC9 and its role in regulating key signaling pathways. RWD domain-containing protein 3 (RSUME) functions as a critical enhancer of SUMO conjugation in human cells. It promotes SUMO modification of target proteins including HIF1A, NFKBIA, NR3C1, and TOP1 by facilitating E1-E2 enzyme interactions and thioester bond formation with UBE2I/UBC9. RSUME plays dual regulatory roles - it positively regulates NF-κB signaling through NFKBIA sumoylation and stabilization, while negatively regulating HIF1A signaling during hypoxia. The protein localizes to both nucleus and cytoplasm, colocalizing with UBC9/UBE2I in nuclear spots, indicating its central role in nuclear sumoylation processes. This recombinant fragment provides researchers with a defined tool to explore RSUME's domain-specific functions in SUMO pathway regulation.