Recombinant DDB2 protein (His tag)

Catalog Number	540894
Synonyms	DDB p48 subunit; DDBb; Damage-specific DNA-binding protein 2; UV-damaged DNA-binding protein 2; UV-DDB 2
Species	Human
Expression System	E. coli
Accession	Q92466
Molecular Weight	Predictes a molecular mass of 42.07 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 42 kDa band.

Product Information

Sequence Region	68-427
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 68-427 aa (Q92466) 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 DNA Damage-Binding Protein 2 (DDB2) Fragment (68-427) is a high-purity, stable protein designed for advanced DNA repair and ubiquitination studies. This 360-amino acid fragment retains key functional characteristics of the full-length protein, making it an ideal tool for structural biology, biochemical assays, and investigating nucleotide excision repair mechanisms. DNA Damage-Binding Protein 2 (DDB2) is a crucial human nuclear protein that serves dual roles in DNA damage recognition and protein ubiquitination. As a core component of the UV-DDB complex, it specifically recognizes UV-induced DNA lesions including cyclobutane pyrimidine dimers and 6-4 photoproducts, initiating the nucleotide excision repair pathway. Additionally, DDB2 functions as the substrate recognition module in the DDB2-CUL4-ROC1 E3 ubiquitin ligase complex, where it ubiquitinates histones H2A, H3, H4, and XPC to facilitate DNA damage repair. The protein accumulates at DNA damage sites following UV irradiation and plays a critical role in maintaining genomic stability through its coordinated functions in damage recognition and repair pathway activation.