Recombinant PDIP2 protein (His tag)

Catalog Number	548561
Synonyms	38 kDa DNA polymerase delta interaction protein; p38
Species	Human
Expression System	E. coli
Accession	Q9Y2S7
Molecular Weight	Predictes a molecular mass of 37.28 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 38 kDa band.

Product Information

Sequence Region	61-368
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 61-368 aa (Q9Y2S7) 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 Polymerase delta-interacting protein 2 (POLDIP2) fragment (residues 61-368) is a high-purity protein designed for studying DNA damage tolerance mechanisms. This 308-amino acid fragment includes the functional ApaG domain, making it an ideal tool for investigating translesion synthesis and polymerase interactions in controlled experimental settings. The full-length Polymerase delta-interacting protein 2 (POLDIP2) plays a critical role in DNA damage tolerance by regulating translesion synthesis (TLS) of templates containing DNA damage lesions such as 8oxoG and abasic sites. It functions by stimulating the activity of DNA polymerases involved in TLS, including PRIMPOL and polymerase delta (POLD1). POLDIP2 primarily localizes to the mitochondrial matrix, with a smaller fraction found in the nucleus, indicating its involvement in both nuclear and mitochondrial DNA maintenance pathways. This protein's ability to facilitate DNA synthesis across damaged templates makes it significant for understanding cellular responses to genotoxic stress and DNA repair mechanisms.