Recombinant DPOD2 protein (His tag)

Catalog Number	532991
Synonyms	Pol31 polymerase delta subunit
Species	Drosophila melanogaster
Expression System	E. coli
Accession	Q9W088
Gene ID	38228
Molecular Weight	Predictes a molecular mass of 49.67 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 50 kDa band.

Product Information

Sequence Region	1-431
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 1-431 aa (Q9W088) 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 Drosophila melanogaster DNA polymerase delta subunit 2 (Pol31 polymerase delta subunit) fragment (amino acids 1-431) - a highly stable and soluble protein unit ideal for structural biology studies and biochemical characterization of DNA replication machinery. DNA polymerase delta subunit 2, encoded by the PolD2 gene, serves as an essential accessory component of both the DNA polymerase delta complex and potentially the DNA polymerase zeta complex. As part of the delta complex, it contributes to high-fidelity genome replication processes including lagging strand synthesis, DNA recombination, and DNA repair mechanisms. Research indicates this subunit promotes the function of the DNA pol-delta complex accessory subunit PolD3 in both embryonic and postembryonic somatic cells. The protein localizes primarily to the nucleus and nucleoplasm, with dynamic localization patterns observed during the cell cycle - accumulating in the nucleus during interphase and dispersing into the nucleoplasm at mitosis onset. This recombinant fragment represents a computationally optimized stable domain suitable for investigating the structural and functional properties of this critical DNA replication component.