Recombinant DPOLM protein (His tag)

Catalog Number	541317
Synonyms	Pol Mu; Terminal transferase
Species	Human
Expression System	E. coli
Accession	Q9NP87
Molecular Weight	Predictes a molecular mass of 56.48 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 56 kDa band.

Product Information

Sequence Region	1-494
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 1-494 aa (Q9NP87) 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-directed DNA/RNA polymerase mu (Pol Mu) fragment (amino acids 1-494) is a high-purity protein designed for studying DNA repair mechanisms and V(D)J recombination. This fragment includes the full-length BRCT domain, making it an ideal tool for investigating domain-specific functions in non-homologous end joining pathways. DNA-directed DNA/RNA polymerase mu (Pol Mu), encoded by the POLM gene in humans, functions as a gap-filling polymerase essential for repairing DNA double-strand breaks through non-homologous end joining (NHEJ). It plays a critical role in immunoglobulin light chain gene rearrangement during V(D)J recombination, contributing to adaptive immune system development. The protein is localized to the nucleus, where it executes its DNA repair activities. Research citations support its involvement in these fundamental cellular processes, highlighting its importance in maintaining genomic stability.