Recombinant DPPA3 protein (His tag)

Catalog Number	540551
Synonyms	Stella-related protein
Species	Human
Expression System	E. coli
Accession	Q6W0C5
Molecular Weight	Predictes a molecular mass of 10.33 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 10 kDa band.

Product Information

Sequence Region	84-159
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 84-159 aa (Q6W0C5) 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 Developmental pluripotency-associated protein 3 (DPPA3) fragment (residues 84-159), a stable and soluble Stella-related protein segment designed for epigenetic and chromatin reprogramming studies. This human-derived fragment is ideal for structural and biochemical investigations into early embryonic development and totipotency mechanisms. Developmental pluripotency-associated protein 3 (DPPA3) is a primordial germ cell-specific protein crucial for epigenetic chromatin reprogramming in zygotes post-fertilization. It plays a key role in protecting the maternal pronucleus and certain paternally-imprinted loci from DNA demethylation by binding to histone H3 dimethylated at Lys-9 (H3K9me2) and inhibiting TET3-mediated conversion of 5-methylcytosine (5mC) to 5-hydroxymethylcytosine (5hmC). This selective action ensures genomic stability during early embryogenesis and supports totipotent/pluripotent states in preimplantation development. DPPA3 is primarily localized in the nucleus and cytoplasm, with strong presence in the female pronucleus, and is also involved in chromatin condensation during oocytogenesis, underscoring its importance in reproductive biology and epigenetic regulation.