# Recombinant STPG4 protein (His tag)

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| **Catalog Number** | 549830 |
| **Synonyms** | Gonad-specific expression gene protein; GSE; Sperm-tail PG-rich repeat-containing protein 4 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q8N801 |
| **Molecular Weight** | Predictes a molecular mass of 25.47 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band. |

## Product Information

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| **Sequence Region** | 39-248 |
| **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 39-248 aa (Q8N801) were fused with 6His tag. |

## Storage & Handling

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| **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.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | Recombinant Protein STPG4 Fragment (39-248) is a high-quality, stable, and soluble protein fragment derived from the human Gonad-specific expression gene protein. This product is designed for researchers studying epigenetic chromatin reprogramming and DNA demethylation processes in early zygote development, offering a reliable tool for structural and biochemical analyses.<br>Protein STPG4, also known as Gonad-specific expression gene protein (GSE) or Sperm-tail PG-rich repeat-containing protein 4, is a maternal factor crucial for epigenetic chromatin reprogramming during early zygote development. It regulates gametic DNA demethylation by facilitating the conversion of 5-methylcytosine (5mC) to 5-hydroxymethylcytosine (5hmC), a key step in epigenetic modification. The protein localizes to both the cytoplasm and nucleus, with specific enrichment in the pronucleus of female and male zygotes, where it preferentially associates with paternal chromatin. This fragment (amino acids 39-248) was selected to provide a stable and soluble unit for experimental use, reflecting the protein's functional relevance in developmental biology. |