# Recombinant S22AE protein (His tag)

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| **Catalog Number** | 541576 |
| **Synonyms** | Organic cation transporter-like 4; ORCTL-4 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q9Y267 |
| **Molecular Weight** | Predictes a molecular mass of 12.13 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band. |

## Product Information

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| **Sequence Region** | 92-184 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >85%, 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 92-184 aa (Q9Y267) 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 Human SLC22A14 (Organic cation transporter-like 4) Fragment (aa 92-184) is a high-purity protein fragment derived from the Homo sapiens Solute carrier family 22 member 14. This 93-amino acid fragment was computationally selected for stability and solubility, making it an ideal tool for structural studies, biochemical assays, and functional investigations of riboflavin transport mechanisms relevant to male fertility research.<br>The full-length SLC22A14 protein functions as a riboflavin transporter localized at the inner mitochondrial membrane of spermatozoa midpiece, playing a critical role in male fertility. It facilitates riboflavin transport necessary for energy generation and sperm motility, as riboflavin serves as the precursor for FMN and FAD coenzymes required for mitochondrial TCA cycle enzymes. The protein is a multi-pass membrane protein located in both the mitochondrial inner membrane and the flagellum membrane of sperm cell projections, with specific localization to the principle piece of the sperm tail, where it supports normal sperm flagellar structure and motility. |