# Recombinant SMIP4 protein (His tag)

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| **Catalog Number** | 545451 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q8N865 |
| **Molecular Weight** | Predictes a molecular mass of 22.24 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 22 kDa band. |

## Product Information

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| **Sequence Region** | 144-321 |
| **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 144-321 aa (Q8N865) 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 SPMIP4 (144-321) is a high-quality protein fragment derived from Sperm-associated microtubule inner protein 4. This 178-amino acid fragment is engineered for stability and solubility, making it an ideal tool for structural studies and biochemical assays focused on microtubule and flagellar function.<br>Sperm-associated microtubule inner protein 4 (SPMIP4), encoded by the SPMIP4 gene in Homo sapiens, functions as a microtubule inner protein (MIP) within the dynein-decorated doublet microtubules (DMTs) of the flagellum axoneme. It plays a critical role in reinforcing and stabilizing microtubule structures in sperm flagella, contributing to axonemal integrity. The protein localizes to the cytoplasm, specifically to the cytoskeleton, microtubule organizing center (centrosome), and flagellum axoneme, where it is found on the A-tubules of DMTs. This localization underscores its importance in cellular motility and structural support mechanisms. |