# Recombinant SHSA6 protein (His tag)

| | |
|---|---|
| **Catalog Number** | 545261 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q6ZSJ9 |
| **Molecular Weight** | Predictes a molecular mass of 11.72 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band. |

## Product Information

| | |
|---|---|
| **Sequence Region** | 90-174 |
| **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 90-174 aa (Q6ZSJ9) 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.<br>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 Protein shisa-6 Fragment (aa 90-174) is a highly stable and soluble protein fragment designed for structural and biochemical studies. This product enables researchers to investigate the role of Protein shisa-6 in maintaining high-frequency synaptic transmission and regulating AMPA-type glutamate receptor activity, offering a reliable tool for neuroscience and cell signaling research.<br>Protein shisa-6, encoded by the SHISA6 gene in Homo sapiens, plays a critical role in sustaining high-frequency synaptic transmission at hippocampal CA3-CA1 synapses. It functions by regulating the immobilization of AMPA-type glutamate receptors (AMPARs) at the postsynaptic density, maintaining these channels in an activated state in the presence of glutamate and preventing synaptic depression. Additionally, it may contribute to self-renewal and differentiation of spermatogonial stem cells through inhibition of the canonical Wnt signaling pathway. The protein is localized to the membrane as a single-pass type I membrane protein and is enriched in the postsynaptic density, underscoring its importance in neuronal function and cellular differentiation processes. |