# Recombinant CTSRT protein (His tag)

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| **Catalog Number** | 538180 |
| **Synonyms** | CatSper-tau; Amyotrophic lateral sclerosis 2 chromosomal region candidate gene 11 protein; C2 calcium-dependent domain-containing protein 6 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q53TS8 |
| **Molecular Weight** | Predictes a molecular mass of 17.63 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band. |

## Product Information

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| **Sequence Region** | 107-241 |
| **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 107-241 aa (Q53TS8) 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** | Introducing the recombinant human Cation channel sperm-associated targeting subunit tau (CatSper-tau) fragment (residues 107-241), a highly stable and soluble protein unit ideal for structural and biochemical studies. This fragment, derived from the C2CD6 gene, is essential for understanding sperm motility mechanisms and the CatSper complex's role in fertilization.<br>The full-length CatSper-tau protein, encoded by the C2CD6 gene, serves as an auxiliary component of the CatSper complex, which is critical for sperm cell hyperactivation—a process necessary for sperm motility and successful fertilization. It facilitates the targeting and trafficking of the CatSper complex into quadrilinear nanodomains by linking channel-carrying vesicles to motor proteins, ensuring proper localization in elongating flagella. Subcellularly, it is specifically located in the principal piece of the sperm tail flagellum membrane, highlighting its specialized role in reproductive biology. |