Recombinant SYCP3 protein (His tag)

Catalog Number	547710
Synonyms	SCP-3
Species	Human
Expression System	E. coli
Accession	Q8IZU3
Molecular Weight	Predictes a molecular mass of 21.97 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 22 kDa band.

Product Information

Sequence Region	67-236
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 67-236 aa (Q8IZU3) 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. 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 Synaptonemal Complex Protein 3 (SCP-3) Fragment (residues 67-236) is a high-quality protein derived from the SYCP3 gene, designed for structural and biochemical research. This 170-amino acid fragment represents a stable, soluble unit ideal for studying the molecular mechanisms of meiosis, chromosome pairing, and fertility. Synaptonemal Complex Protein 3 (SCP-3), encoded by the SYCP3 gene, is a critical component of the synaptonemal complexes that form between homologous chromosomes during meiotic prophase. It plays an essential role in centromere pairing in male germ cells and is required for normal spermatogenesis and male fertility, with a lesser role in female fertility. SCP-3 also facilitates efficient phosphorylation of HORMAD1 and HORMAD2. Subcellularly, it localizes to the nucleus, specifically on chromosomes and centromeres, where it is present in early unpaired cores, lateral domains of the synaptonemal complex, and axial to metaphase I chromosomes. It associates with sister centromere pairs but dissociates at anaphase II and is absent in mitotic metaphase centromeres, underscoring its meiosis-specific functions.