Recombinant SMC3 protein (His tag)

Catalog Number	548532
Synonyms	SMC protein 3; SMC-3; Basement membrane-associated chondroitin proteoglycan; Bamacan; Chondroitin sulfate proteoglycan 6; Chromosome-associated polypeptide; hCAP
Species	Human
Expression System	E. coli
Accession	Q9UQE7
Molecular Weight	Predictes a molecular mass of 15.90 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 17 kDa band.

Product Information

Sequence Region	1091-1217
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 1091-1217 aa (Q9UQE7) 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 SMC3 Protein Fragment (1091-1217) is a highly stable and soluble 127-amino acid segment of the Structural Maintenance of Chromosomes Protein 3, designed for structural and biochemical studies. This fragment supports research into chromosome cohesion, cell cycle regulation, and DNA repair mechanisms. The full-length SMC3 protein is a central component of the cohesin complex, essential for sister chromatid cohesion during the cell cycle. This complex forms a ring-like structure that entraps chromatids, ensuring proper chromosome segregation at anaphase after cleavage. Cohesin is also involved in DNA repair, spindle pole assembly during mitosis, and chromosome movement. SMC3 localizes to the nucleus and chromosomes, particularly at centromeres, where it remains during prophase while dissociating from other chromatin regions. Its role in maintaining genomic integrity makes it a critical target for cell biology and oncology research.