Recombinant SPOC1 protein (His tag)

Catalog Number	540557
Species	Human
Expression System	E. coli
Accession	Q6ZMY3
Molecular Weight	Predictes a molecular mass of 17.18 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band.

Product Information

Sequence Region	606-740
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 606-740 aa (Q6ZMY3) 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 SPOCD1 Fragment (606-740) is a precisely engineered protein domain that encompasses the complete TFIIS central functional region of SPOC domain-containing protein 1. This high-quality recombinant fragment provides researchers with a targeted tool for investigating the specific molecular functions of this critical domain in epigenetic regulation and transposon silencing mechanisms. SPOCD1 (SPOC domain-containing protein 1) functions as an essential protein adapter that executes the PIWIL4-piRNA pathway-directed transposon DNA methylation and silencing in male embryonic germ cells. The protein is recruited to young transposons marked with histone H3 trimethylated at both Lys-4 and Lys-9 (H3K4me3K9me3) through its association with SPIN1 chromatin reader. SPOCD1 associates with the de novo DNA methylation machinery and repressive chromatin remodeling complexes, facilitating PIWIL4 engagement with nascent transposable element transcripts to direct piRNA-directed DNA methylation. Importantly, SPOCD1 is not required for piRNA biosynthesis. The protein localizes to the nucleus and chromosomes, where it performs its critical regulatory functions in epigenetic silencing.