Recombinant AFG2A protein (His tag)

Catalog Number	547769
Synonyms	AFG2 AAA ATPase homolog A; Ribosome biogenesis protein SPATA5; Spermatogenesis-associated factor protein; Spermatogenesis-associated protein 5
Species	Human
Expression System	E. coli
Accession	Q8NB90
Molecular Weight	Predictes a molecular mass of 19.00 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 19 kDa band.

Product Information

Sequence Region	45-203
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 45-203 aa (Q8NB90) 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 AFG2A protein fragment (residues 45-203) from Homo sapiens, a stable and soluble unit ideal for investigating the ATP-dependent chaperone functions of the ATPase family gene 2 protein homolog A in replisome proteostasis and ribosomal maturation. The full-length ATPase family gene 2 protein homolog A (AFG2A) is an ATP-dependent chaperone integral to the 55LCC heterohexameric ATPase complex, which associates with chromatin to maintain replication fork progression and genome stability. It enhances replisome proteostasis by utilizing ATPase activity, stimulated by replication fork DNA, to process substrates during S-phase, ensuring DNA replication fidelity and mitotic accuracy. Additionally, AFG2A facilitates cytoplasmic maturation of pre-60S ribosomal particles by promoting the release of shuttling proteins. It is localized in the cytoplasm, mitochondria, and cytoskeletal spindles, with potential roles in mitochondrial transformations during spermatogenesis. This fragment supports structural and biochemical studies of these critical cellular processes.