Recombinant ATPG protein (His tag)

Catalog Number	539923
Synonyms	1; ATP synthase F1 subunit gamma; F-ATPase gamma subunit
Species	Human
Expression System	E. coli
Accession	P36542
Molecular Weight	Predictes a molecular mass of 31.82 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 32 kDa band.

Product Information

Sequence Region	26-298
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 26-298 aa (P36542) 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 ATP synthase F1 complex subunit gamma (ATP5F1C) fragment (residues 26-298) is a high-quality protein preparation designed for mitochondrial energy metabolism research. This 273-amino acid fragment represents a stable, soluble unit of the catalytic core complex, ideal for structural studies and functional assays investigating ATP synthase assembly and activity. ATP synthase F1 complex subunit gamma is an essential component of the mitochondrial ATP synthase complex (Complex V), which generates ATP from ADP using the proton gradient created by the respiratory chain. As part of the F1 catalytic head domain, subunit gamma forms the central stalk that rotates during catalysis, coupling proton translocation to ATP synthesis. The protein localizes to the mitochondrial inner membrane on the matrix side as a peripheral membrane protein. Beyond its catalytic role, subunit gamma, together with the delta subunit, is crucial for the biogenesis of the F1 catalytic core, facilitating the formation of F1 assembly intermediates. While the native enzyme exclusively synthesizes ATP in vivo, its ATP hydrolase activity can be activated under artificial conditions in vitro.