Recombinant FDX2 protein (His tag)

Catalog Number	545211
Synonyms	Adrenodoxin-like protein; Ferredoxin-1-like protein
Species	Human
Expression System	E. coli
Accession	Q6P4F2
Molecular Weight	Predictes a molecular mass of 14.75 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	65-183
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 65-183 aa (Q6P4F2) 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 Ferredoxin-2 (FDX2) Fragment (aa 65-183) is a high-purity protein designed for studying mitochondrial iron-sulfur cluster assembly and coenzyme Q biosynthesis. This fragment fully encompasses the essential 2Fe-2S ferredoxin-type domain, making it an ideal tool for investigating electron transfer mechanisms and cluster maturation processes in vitro. Ferredoxin-2 (FDX2) is a crucial mitochondrial electron donor protein involved in multiple essential cellular processes. As part of the core iron-sulfur cluster (ISC) assembly complex, FDX2 provides reducing equivalents necessary for converting persulfide to sulfide during [2Fe-2S] cluster assembly on the scaffolding protein ISCU, representing the initial step in mitochondrial iron-sulfur protein biogenesis. Additionally, FDX2 works in conjunction with ferredoxin reductase (FDXR) to supply electrons for the hydroxylation reactions catalyzed by COQ6 during coenzyme Q biosynthesis. The protein is localized to the mitochondrial matrix, where it participates in these fundamental metabolic pathways essential for cellular energy production and redox homeostasis.