Recombinant HEM6 protein (His tag)

Catalog Number	544579
Synonyms	COX; Coprogen oxidase; Coproporphyrinogenase
Species	Human
Expression System	E. coli
Accession	P36551
Molecular Weight	Predictes a molecular mass of 39.78 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 42 kDa band.

Product Information

Sequence Region	121-454
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 121-454 aa (P36551) 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 COX (CPOX) Fragment (residues 121-454) is a high-quality protein product designed for structural and biochemical research. This 334-amino acid fragment, derived from the oxygen-dependent coproporphyrinogen-III oxidase, represents a stable and soluble unit ideal for investigating its role in the heme biosynthesis pathway. The full-length COX protein, encoded by the CPOX gene in Homo sapiens, is a mitochondrial enzyme that catalyzes the aerobic oxidative decarboxylation of propionate groups in coproporphyrinogen-III to form protoporphyrinogen-IX. This reaction constitutes the sixth step in the heme biosynthetic pathway, which is essential for oxygen transport and cellular metabolism. The protein is localized to the mitochondrial intermembrane space, underscoring its critical role in energy-producing organelles. The provided fragment was computationally selected to ensure stability and solubility, facilitating detailed studies of COX's enzymatic mechanisms and structural features.