Recombinant COX2 protein (His tag)

Catalog Number	546627
Synonyms	Cytochrome c oxidase polypeptide II
Species	Human
Expression System	E. coli
Accession	P00403
Molecular Weight	Predictes a molecular mass of 17.48 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 17 kDa band.

Product Information

Sequence Region	88-227
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 88-227 aa (P00403) 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 Cytochrome c oxidase subunit 2 (EC 7.1.1.9) Fragment (residues 88-227) is a highly stable and soluble protein unit designed for structural and biochemical studies. This fragment enables detailed investigation of the mitochondrial electron transport chain's terminal enzyme, supporting research in oxidative phosphorylation and cellular energy metabolism. Cytochrome c oxidase subunit 2, encoded by the MT-CO2 gene, is a critical component of complex IV in the mitochondrial electron transport chain. It facilitates oxidative phosphorylation by transferring electrons from reduced cytochrome c to molecular oxygen, catalyzing its reduction to water. This process generates an electrochemical gradient across the inner mitochondrial membrane, essential for ATP synthesis and cellular energy production. The full-length protein is localized to the mitochondrial inner membrane as a multi-pass membrane protein, where it functions via its dinuclear copper A center to drive aerobic respiration.