Recombinant CP2E1 protein (His tag)

Catalog Number	546683
Synonyms	4-nitrophenol 2-hydroxylase; CYPIIE1; Cytochrome P450-J
Species	Human
Expression System	E. coli
Accession	P05181
Molecular Weight	Predictes a molecular mass of 58.51 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 59 kDa band.

Product Information

Sequence Region	1-493
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 1-493 aa (P05181) 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 P450 2E1 (CYP2E1) Fragment (1-493) is a high-purity, stable protein designed for structural and biochemical studies. This fragment, encompassing the full-length sequence, retains key functional domains and offers enhanced solubility, making it ideal for investigating fatty acid metabolism and xenobiotic processing. Cytochrome P450 2E1 (CYP2E1) is a monooxygenase enzyme critical in the metabolism of fatty acids, particularly through hydroxylation at the omega-1 position, with highest activity toward saturated fatty acids. It utilizes molecular oxygen and NADPH to insert oxygen into substrates, playing a potential role in xenobiotic oxidative metabolism. The enzyme is localized to the endoplasmic reticulum, microsome, and mitochondrial inner membranes as a peripheral membrane protein, with post-translational targeting to mitochondria facilitated by TOMM70. This recombinant fragment (1-493) represents a stable, soluble unit optimized for research applications, enabling detailed exploration of CYP2E1's catalytic mechanisms and biological relevance.