Recombinant C11B2 protein (His tag)

Catalog Number	537592
Synonyms	Aldosterone synthase; ALDOS; Aldosterone-synthesizing enzyme; CYPXIB2; Corticosterone 18-monooxygenase, CYP11B2; Cytochrome P-450Aldo; Cytochrome P-450C18; Steroid 11-beta-hydroxylase, CYP11B2; Steroid 18-hydroxylase
Species	Human
Expression System	E. coli
Accession	P19099
Molecular Weight	Predictes a molecular mass of 55.68 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 56 kDa band.

Product Information

Sequence Region	34-503
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 34-503 aa (P19099) 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 11B2 (CYP11B2) Fragment (aa 34-503) is a high-purity, stable protein fragment designed for structural and biochemical studies. This product captures the essential catalytic domain of aldosterone synthase, enabling researchers to investigate its critical role in mineralocorticoid biosynthesis and blood pressure regulation. Cytochrome P450 11B2 (CYP11B2), also known as aldosterone synthase, is a mitochondrial inner membrane monooxygenase that catalyzes the biosynthesis of aldosterone—the primary mineralocorticoid regulating salt and water homeostasis in humans. It performs three sequential oxidative reactions on 11-deoxycorticosterone (11-beta hydroxylation followed by two C18 oxidations) to produce aldosterone, a process vital for blood pressure control and linked to arterial hypertension and heart failure. The enzyme also generates 18-hydroxycortisol and 18-oxocortisol, biomarkers elevated in primary aldosteronism, and utilizes NADPH via the FDXR/FDX1/2 electron transfer system. Located in the mitochondrial inner membrane as a peripheral membrane protein, CYP11B2's activity underscores its significance in endocrine physiology and cardiovascular disease research.