Data Sheet (Cat.No.TMPH-01181)

TargetMol

CYP11B2 Protein, Human, Recombinant (His & SUMO)

General Information

Synonyms:	Steroid 11-beta-hydroxylase, CYP11B2;CYPXIB2;mitochondrial;Cytochrome P-450Aldo; Cytochrome P450 11B2, mitochondrial;Aldosterone-synthesizing enzyme;Steroid 18-hydroxylase;Corticosterone 18-monooxygenase, CYP11B2;CYP11B2;Cytochrome P-450C18; Aldosterone synthase (ALDOS)
Protein Construction:	25-503
Species:	Human
Expression Host:	E. coli
Accession:	P19099
Molecular Weight:	71.0 kDa (predicted)
AA Sequence:	GTRAARAPRTVLPFEAMPQHPGNRWLRLLQIWREQGYEHLHLEMHQTFQELGPIFRYNLGGPRMVCVMLPE DVEKLQQVDSLHPCRMILEPWVAYRQHRGHKCGVFLLNGPEWRFNRLRLNPDVLSPKAVQRFLPMVDAVA RDFSQALKKKVLQNARGSLTLDVQPSIFHYTIEASNLALFGERLGLVGHSPSSASLNFLHALEVMFKSTVQLMF MPRSLSRWISPKVWKEHFEAWDCIFQYGDNCIQKIYQELAFNRPQHYTGIVAELLLKAELSLEAIKANSMELTA GSVDTTAFPLLMTLFELARNPDVQQILRQESLAAAASISEHPQKATTELPLLRAALKETLRLYPVGLFLERVVSS DLVLQNYHIPAGTLVQVFLYSLGRNAALFPRPERYNPQRWLDIRGSGRNFHHVPFGFGMRQCLGRRLAEAE MLLLLHHVLKHFLVETLTQEDIKMVYSFILRPGTSPLLTFRAIN

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

A cytochrome P450 monooxygenase that catalyzes the biosynthesis of adrenal mineralocorticoid aldosterone. Catalyzes three sequential oxidative reactions of 11-deoxycorticosterone/21-hydroxyprogesterone, namely 11-beta hydroxylation followed with two successive oxidations at C18 to yield 18-hydroxy and then 18-aldehyde derivatives, resulting in the formation of aldosterone. Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate and reducing the second into a water molecule. Two electrons are provided by NADPH via a two-protein mitochondrial transfer system comprising flavoprotein FDXR (adrenodoxin/ferredoxin reductase) and nonheme iron-sulfur protein FDX1 or FDX2 (adrenodoxin/ferredoxin).

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