10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-CYP11B1 Antibody

Catalog # ABO11010

Product Information

Application	WB
Primary Accession	P15538
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Cytochrome P450 11B1, mitochondrial(CYP11B1) detection. Tested with WB in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	1584
Other Names	Cytochrome P450 11B1, mitochondrial, CYPXIB1, Cytochrome P-450c11, Cytochrome P450C11, Steroid 11-beta-hydroxylase, 1.14.15.4, CYP11B1, S11BH
Calculated MW	57573
Application Details	Western blot, 0.1-0.5 □g/ml, Human
Subcellular Localization	Mitochondrion membrane.
Source	Eukaryota
Protein Name	Cytochrome P450 11B1, mitochondrial
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human CYP11B1(436-450aa RNFYHVPFGFGMRQC).
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

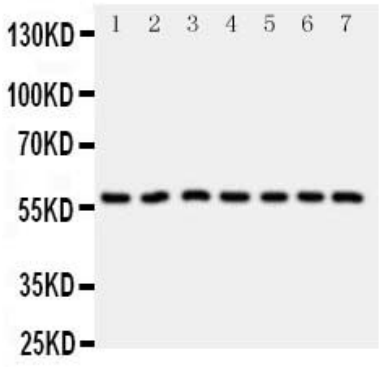
Name	CYP11B1 {ECO:0000303|PubMed:18215163, ECO:0000312|HGNC:HGNC:2591}
Function	A cytochrome P450 monooxygenase mainly involved in the biosynthesis of adrenal corticoids (PubMed:12530636, PubMed:1518866, PubMed:1775135, PubMed:18215163, PubMed:23322723, PubMed:23685396, PubMed:29277707). Catalyzes a variety of reactions that are essential for many species, including detoxification, defense, and the formation of endogenous chemicals like steroid hormones. Steroid 11beta, 18- and 19-hydroxylase with preferred regioselectivity at 11beta, then 18, and lastly 19 (By similarity). Catalyzes the hydroxylation of 11- deoxycortisol and 11-deoxycorticosterone (21-hydroxyprogesterone) at 11beta position, yielding cortisol or corticosterone, respectively, but cannot produce aldosterone (PubMed:12530636, PubMed:1518866, PubMed:1775135, PubMed:18215163, PubMed:23322723, PubMed:23685396, PubMed:29277707). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate for hydroxylation 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) (PubMed:18215163, PubMed:23685396). Due to its lack of 18-oxidation activity, it is incapable of generating aldosterone (PubMed:23322723). Besides its role in the biosynthesis of mineralocorticoids and glucocorticoids, it can also participate in the androgen metabolic pathway, converting androst-4-ene-3,17-dione to 11beta-hydroxyandrost-4-ene-3,17-dione, and testosterone (17beta- hydroxy-4-androsten-3-one) to 11beta,17beta-dihydroxyandrost-4-ene-3- one (PubMed:23685396, PubMed:29277707).
Cellular Location	Mitochondrion inner membrane {ECO:0000250|UniProtKB:P14137}; Peripheral membrane protein {ECO:0000250|UniProtKB:P14137}
Tissue Location	Expressed in the zona fasciculata/reticularis of the adrenal cortex.

Background

CYP11B1(Cytochrome p450, family 11, subfamily B, polypeptide 1), also called Steroid 11-beta-hydroxylase or P450C11, is a steroid hydroxylase found in the zona fasciculata. The CYP11B1 gene functions primarily in mitochondria in the zona fasciculata of the adrenal cortex to convert 11-deoxycortisol to cortisol and 11-deoxycorticosterone to corticosterone. CYP11B1 is a member of the cytochrome P450 superfamily of enzymes. It is mapped on 8q24.3. The CYP11B1 gene contains 9 exons and spans 6.5 kb. Using RT-PCR, Kayes-Wandover and White detected CYP11B1 mRNA in human cardiac tissue samples from left and right atria, aorta, apex, intraventricular septum, and atrioventricular node, as well as whole adult and fetal heart. Ventricles did not express CYP11B1. In patients with 11-beta-hydroxylase deficiency leading to hypertension and congenital adrenal hyperplasia, Pascoe et al. identified mutations in the CYP11B1 gene.

Images

Anti-CYP11B1 antibody, ABO11010, Western blottingAll lanes: Anti CYP11B1 (ABO11010) at 0.5ug/mlLane 1: HELA Whole Cell Lysate at 40ugLane 2: U87 Whole Cell Lysate at 40ugLane 3: MM231 Whole Cell Lysate at 40ugLane 4: PANC Whole Cell Lysate at 40ugLane 5: MM453 Whole



Cell Lysate at 40ugLane 6: HELA Whole Cell Lysate at 40ugLane 7: SMMC Whole Cell Lysate at 40ugPredicted bind size: 58KDObserved bind size: 58KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.