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Anti-Cytochrome P450 11B1/2 Antibody

Catalog # AP53988

Product Information

Application	WB, IF/IC
Primary Accession	P15538
Other Accession	P19099
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57573

Additional Information

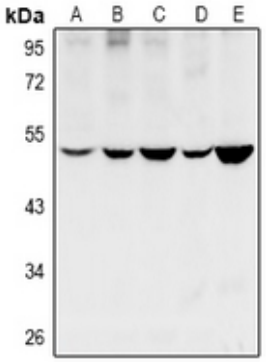
Gene ID	1584
Other Names	CYP11B1; S11BH; Cytochrome P450 11B1 mitochondrial; CYPXIB1; Cytochrome P-450c11; Cytochrome P450C11; Steroid 11-beta-hydroxylase; CYP11B2; Cytochrome P450 11B2 mitochondrial; Aldosterone synthase; ALDOS; Aldosterone-synthesizing enzyme; CYPXIB2; Cytochrome P-450Aldo; Cytochrome P-450C18; Steroid 18-hydroxylase
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Cytochrome P450 11B1/2. The exact sequence is proprietary.
Dilution	WB~~1/500 - 1/1000 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

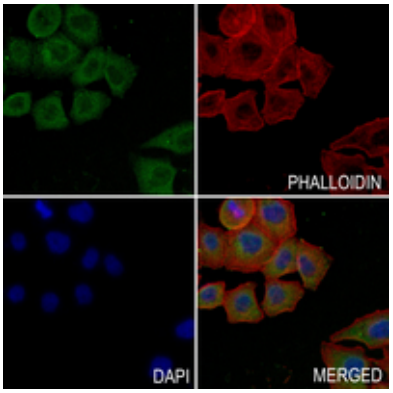
Name	CYP11B1 {ECO:0000303|PubMed:18215163, ECO:0000312|HGNC:HGNC:2591}
Function	A cytochrome P450 monooxygenase mainly involved in the biosynthesis of adrenal corticoids (PubMed:12530636, PubMed:1518866, PubMed:1775135, PubMed:18215163, PubMed:23322723, PubMed:23685396, PubMed:29277707). Catalyzes a 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.

Images



Western blot analysis of Cytochrome P450 11B1/2 expression in HEK293T (A), LO2 (B), SGC7901 (C), PC12 (D), CT26 (E) whole cell lysates. (Predicted band size: 57 kD; Observed band size: 48 kD)



Immunofluorescent analysis of Cytochrome P450 11B1/2 staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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