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

CYP11B1/2 Polyclonal Antibody

Catalog # AP73407

Product Information

Application	WB, E
Primary Accession	P15538
Reactivity	Human
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
Dilution	WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/20000. Not yet tested in other applications. E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

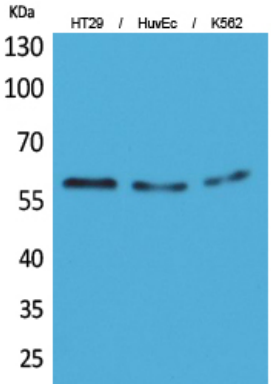
Name	CYP11B1 {ECO:0000303|PubMed:18215163, ECO:0000312|HGNC:HGNC:2591}
Function	A cytochrome P450 monooxygenase mainly involved in the biosynthesis of adrenal corticoids (PubMed:12530636, PubMed:1518866, PubMed:1775135, PubMed:18215163, PubMed:23322723, PubMed:23685396, PubMed:29277707). Catalyzes a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

Has steroid 11-beta-hydroxylase activity. In addition to this activity, the 18 or 19-hydroxylation of steroids and the aromatization of androstendione to estrone have also been ascribed to cytochrome P450 XIB.

Images



Western Blot analysis of HT29, HuvEc, K562 cells using CYP11B1/2 Polyclonal Antibody.. Secondary antibody was diluted at 1:20000

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