

Anti-Cytochrome P450 11A1 Antibody

Rabbit polyclonal antibody to Cytochrome P450 11A1

Catalog # AP59531

Product Information

Application	WB, IF/IC
Primary Accession	P05108
Other Accession	Q9QZ82
Reactivity	Human, Mouse, Rat, Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60102

Additional Information

Gene ID	1583
Other Names	CYP11A; Cholesterol side-chain cleavage enzyme mitochondrial; CYPXIA1; Cholesterol desmolase; Cytochrome P450 11A1; Cytochrome P450(scc)
Target/Specificity	Recognizes endogenous levels of Cytochrome P450 11A1 protein.
Dilution	WB~~WB (1/500 - 1/1000), IF/IC (1/100 - 1/500) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	CYP11A1 {ECO:0000303 PubMed:21636783, ECO:0000312 HGNC:HGNC:2590}
Function	A cytochrome P450 monooxygenase that catalyzes the side-chain hydroxylation and cleavage of cholesterol to pregnenolone, the precursor of most steroid hormones (PubMed: 21636783). Catalyzes three sequential oxidation reactions of cholesterol, namely the hydroxylation at C22 followed with the hydroxylation at C20 to yield 20R,22R- hydroxycholesterol that is further cleaved between C20 and C22 to yield the C21-steroid pregnenolone and 4-methylpentanal (PubMed: 21636783). 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) (PubMed: 21636783).

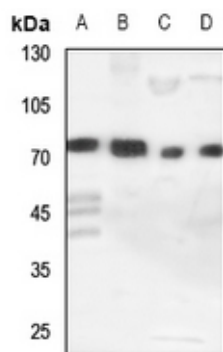
Cellular Location

Mitochondrion inner membrane {ECO:0000250|UniProtKB:P14137}; Peripheral membrane protein. Note=Localizes to the matrix side of the mitochondrion inner membrane. {ECO:0000250|UniProtKB:P14137}

Background

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Cytochrome P450 11A1. The exact sequence is proprietary.

Images



Western blot analysis of Cytochrome P450 11A1 expression in HEK293T (A), Hela (B), H460 (C), mouse lung (D) whole cell lysates.



Immunofluorescent analysis of Cytochrome P450 11A1 staining in Jurkat 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 humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

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