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CYP11A1 Polyclonal Antibody

Catalog # AP69370

Product Information

Application	WB
Primary Accession	P05108
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60102

Additional Information

Gene ID	1583
Other Names	CYP11A1; CYP11A; Cholesterol side-chain cleavage enzyme; mitochondrial; CYPXIA1; Cholesterol desmolase; Cytochrome P450 11A1; Cytochrome P450(scc)
Dilution	WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/5000. Not yet tested in other applications.
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

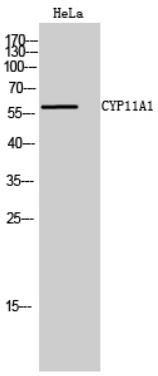
Name	CYP11A1 {ECO:0000303|PubMed:21636783, ECO:0000312|HGNC:HGNC:2590}
Function	A cytochrome P450 monooxygenase that catalyzes the side-chain hydroxylation and cleavage of cholesterol to pregnenolone, the precursor of most steroid hormones (PubMed:21636783). Catalyzes three sequential oxidation reactions 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

Catalyzes the side-chain cleavage reaction of cholesterol to pregnenolone, the precursor of most steroid hormones.

Images



Western Blot analysis of HeLa cells using CYP11A1 Polyclonal Antibody