

Rabbit Anti-CYP11A1 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP52081**Specification****Rabbit Anti-CYP11A1 Polyclonal Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	P05108
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60102

Rabbit Anti-CYP11A1 Polyclonal Antibody - Additional Information**Gene ID** 1583**Other Names**

CYP11A; CYPXIA1; P45SCC; Cholesterol side-chain cleavage enzyme, mitochondrial; Cholesterol desmolase; Cytochrome P45 11A1; Cytochrome P45(scc); CYP11A1

Dilution

WB~1:100~1:500<br \>IHC-P~1:100~1:500

Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Rabbit Anti-CYP11A1 Polyclonal Antibody - 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

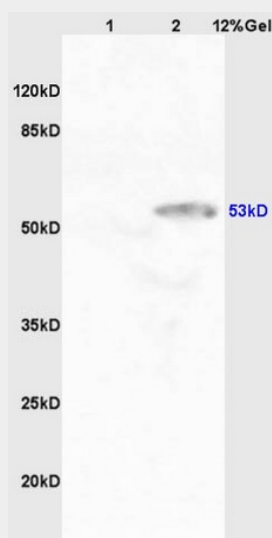
Mitochondrion inner membrane {ECO:0000250|UniProtKB:P14137}; Peripheral membrane protein.
Note=Localizes to the matrix side of the mitochondrion inner membrane.
{ECO:0000250|UniProtKB:P14137}

Rabbit Anti-CYP11A1 Polyclonal Antibody - Protocols

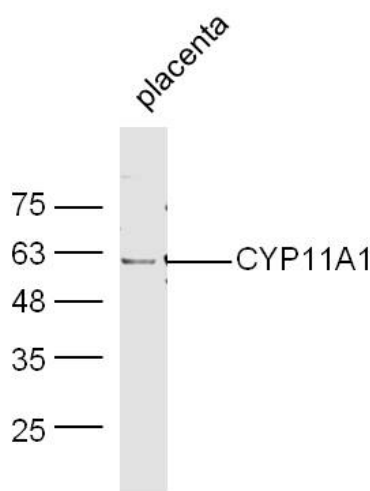
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

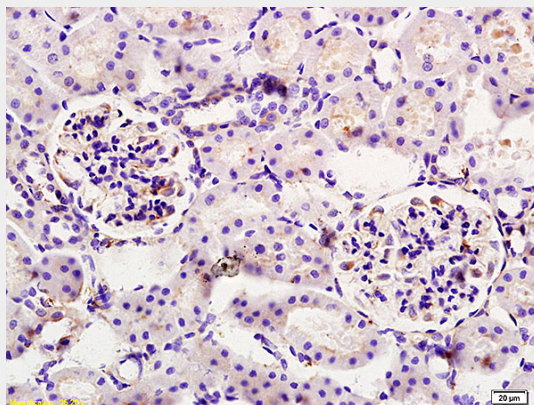
Rabbit Anti-CYP11A1 Polyclonal Antibody - Images



Lane 1: mouse kidney lysates Lane 2: human kidney lysates probed with Anti CYP11A1/P450SCC Polyclonal Antibody, Unconjugated (AP52081) at 1:200 in 4°C. Followed by conjugation to secondary antibody at 1:3000 90min in 37°C. Predicted band 53/57kD. Observed band size: 53kD.



Mouse placenta lysates probed with Rabbit Anti-CYP11A1 Polyclonal Antibody, Unconjugated (AP52081) at 1:300 overnight at 4°C. Followed by conjugation to secondary antibody at 1:500 for 90 min at 37°C.



Formalin-fixed and paraffin embedded rat kidney tissue labeled with Anti CYP11A1/P450SCC Polyclonal Antibody, Unconjugated (AP52081) at 1:200 followed by conjugation to the secondary antibody and DAB staining.

Rabbit Anti-CYP11A1 Polyclonal Antibody - Background

This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. This protein localizes to the mitochondrial inner membrane and catalyzes the conversion of cholesterol to pregnenolone, the first and rate-limiting step in the synthesis of the steroid hormones. Two transcript variants encoding different isoforms have been found for this gene. The cellular location of the smaller isoform is unclear since it lacks the mitochondrial-targeting transit peptide. [provided by RefSeq, Jul 2008]