

Cytochrome P450 11A1 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50651

Specification

Cytochrome P450 11A1 Antibody - Product Information

Application	WB
Primary Accession	P05108
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60 42 KDa
Antigen Region	420-451

Cytochrome P450 11A1 Antibody - Additional Information

Gene ID 1583

Other Names

Cholesterol side-chain cleavage enzyme, mitochondrial, CYPXIA1, Cholesterol desmolase, Cytochrome P450 11A1, Cytochrome P450(scc), CYP11A1, CYP11A

Dilution

WB~~1:1000

Format

Rabbit IgG in phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.

Storage Conditions

-20°C

Cytochrome P450 11A1 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

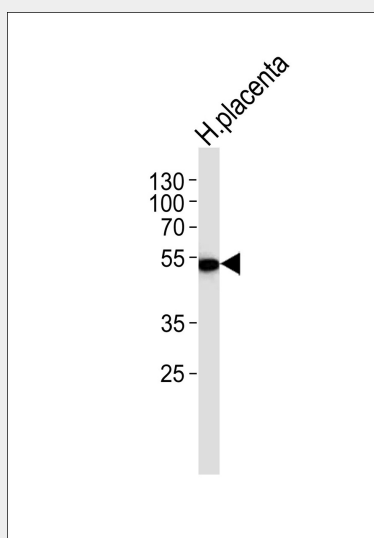
Mitochondrion inner membrane {ECO:0000250|UniProtKB:P14137}; Peripheral membrane protein.
Note=Localizes to the matrix side of the mitochondrion inner membrane.
{ECO:0000250|UniProtKB:P14137}

Cytochrome P450 11A1 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](#)

Cytochrome P450 11A1 Antibody - Images



Western blot analysis of lysate from human placenta tissue lysate, using Cytochrome P450 11A1 Antibody (AP50651). AP50651 was diluted at 1:1000. A goat anti-rabbit IgG H&L (HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug.

Cytochrome P450 11A1 Antibody - Background

Catalyzes the side-chain cleavage reaction of cholesterol to pregnenolone.

Cytochrome P450 11A1 Antibody - References

Chung B.-C., et al. Proc. Natl. Acad. Sci. U.S.A. 83:8962-8966(1986).
Morohashi K., et al. J. Biochem. 101:879-887(1987).
Ota T., et al. Nat. Genet. 36:40-45(2004).
Zody M.C., et al. Nature 440:671-675(2006).
Mural R.J., et al. Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

