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

Cytochrome P450 11A1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50651

Product Information

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

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℃

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}

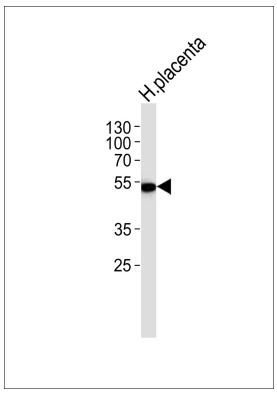
Background

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

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.

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.