

CYP11A1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP7899a**Specification**

CYP11A1 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [P05108](#)**CYP11A1 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 1583**Other Names**

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

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP7899a](/products/AP7899a) was selected from the N-term region of human CYP11A1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CYP11A1 Antibody (N-term) Blocking Peptide - 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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/21636783)).

href="http://www.uniprot.org/citations/21636783" target="_blank">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}

CYP11A1 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

CYP11A1 Antibody (N-term) Blocking Peptide - Images**CYP11A1 Antibody (N-term) Blocking Peptide - Background**

CYP11A1 is 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.

CYP11A1 Antibody (N-term) Blocking Peptide - References

Celhar,T., Cancer Genet. Cytogenet. 187 (1), 28-33 (2008)Morales,A., Pancreas 37 (2), 165-169 (2008)Shigematsu,K., Eur. J. Endocrinol. 158 (6), 867-878 (2008)