

Recombinant Human CYP11A1 protein, GST-tagged

Cat. No. CYP11A1-7132H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CYP11A1(1 a.a. - 521 a.a.), fused with GST tag at N-terminal, was expressed in Wheat Germ.
Species	Human
Source	Wheat Germ
Protein Length	1 a.a. - 521 a.a.
Description	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.
Form	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.
Molecular Mass	86.5 kDa
AA Sequence	MLAKGLPPRSVLVKGCQTFLSAPREGLGRLRVPTGEGAGISTRSPRPFNEIPSPGDN GWLNLHYHFWRETGTHKVH LHHVQNFQKYGPIYREKLGNVESVYVIDPEDVALLFKS EGPNPERFLIPPWWAYHQYYQRPIGVLLKKSAAWKKD RVALNQEVMAPPEATKNFLP

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LLDAVSRDFVSVLHRRIKKAGSGNYSGDISDDLFRFAFESITNVIFGERQGMLEEV V
 NPEAQRFDIAIYQMFHTSVPMNLNPPDLFRLFRRTKTWGDHVAAWDVIFSKADIYTQN
 FYWELRQKGSVHHDYRG ILYRLLGDSKMSFEDIKANVTEMLAGGVDTTSMTLQWH
 LYEMARNLKVQDMLRAEVLAARHQAQGDMATMLQLVP LLKASIKETLRLHPISVTLQ
 RYLVNDLVLRDYMIPAKTLVQVAIYALGREPTFFFDPENFDPTRWLSKDKNITYF RNL
 GFGWGVQRQCLGRRIAEELEMTIFLINMLENFRVEIQHLSVDVGTTFNLILMPEKPISFTF
 WPFNQEATQQ

Applications

Enzyme-linked Immunoabsorbent Assay; Western Blot (Recombinant protein);
 Antibody Production; Protein Array

Notes

Best use within three months from the date of receipt of this protein.

Storage

Store at -80°C. Aliquot to avoid repeated freezing and thawing.

GENE INFORMATION

Gene Name

CYP11A1 cytochrome P450, family 11, subfamily A, polypeptide 1 [Homo sapiens]

Official Symbol

CYP11A1

Synonyms

CYP11A1; cytochrome P450, family 11, subfamily A, polypeptide 1; CYP11A,
 cytochrome P450, subfamily XIA (cholesterol side chain cleavage); cholesterol side-
 chain cleavage enzyme, mitochondrial; cholesterol monooxygenase (side chain
 cleaving); P450SCC; steroid 20-22-lyase; cytochrome P450 11A1; cytochrome
 P450(scc); cytochrome P450C11A1; cholesterol 20-22 desmolase; cholesterol
 monooxygenase (side-chain cleaving); cytochrome P450, subfamily XIA (cholesterol
 side chain cleavage); CYP11A; CYPXIA1;

Gene ID

1583

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mRNA Refseq	NM_001099773
Protein Refseq	NP_001093243
MIM	118485
UniProt ID	P05108
Chromosome Location	15q23-q24
Pathway	Biological oxidations, organism-specific biosystem; Cytochrome P450 - arranged by substrate type, organism-specific biosystem; Endogenous sterols, organism-specific biosystem; Glucocorticoid andamp; Mineralcorticoid Metabolism, organism-specific biosystem; Metabolic pathways, organism-specific biosystem;
Function	cholesterol binding; cholesterol monooxygenase (side-chain-cleaving) activity; cholesterol monooxygenase (side-chain-cleaving) activity; electron carrier activity; heme binding; metal ion binding; monooxygenase activity; oxidoreductase activity, acting on paired donors, with incorporation or reduction of molecular oxygen;