

# Recombinant Human CYP11A1, His-tagged

**Cat. No.** CYP11A1-11761H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>Product Overview</b> | Recombinant Human CYP11A1 protein, fused to His-tag, was expressed in E.coli and purified by Ni-sepharose.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>ProteinLength</b>    | 1-300a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Description</b>      | <p>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.</p> |
| <b>Storage</b>          | The protein is stored in PBS buffer at -20°C. Avoid repeated freezing and thawing cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Storage Buffer</b>   | 1M PBS (58mM Na <sub>2</sub> HPO <sub>4</sub> , 17mM NaH <sub>2</sub> PO <sub>4</sub> , 68mM NaCl, pH8. ) added with 300mM Imidazole and 0.7% Sarcosyl, 15%glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## GENE INFORMATION

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | CYP11A1 cytochrome P450, family 11, subfamily A, polypeptide 1 [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Official Symbol</b>     | CYP11A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Synonyms</b>            | 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; |
| <b>Gene ID</b>             | 1583                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>mRNA Refseq</b>         | NM_000781                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Protein Refseq</b>      | NP_000772                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>MIM</b>                 | 118485                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>UniProt ID</b>          | P05108                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Chromosome Location</b> | 15q23-q24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Pathway</b>             | Biological oxidations, organism-specific biosystem; Cytochrome P450 - arranged by substrate type, organism-specific biosystem; Endogenous sterols, organism-specific biosystem; Glucocorticoid & Mineralcorticoid Metabolism, organism-specific biosystem; Metabolic pathways, organism-specific biosystem;                                                                                                                                                                                                         |
| <b>Function</b>            | cholesterol binding; cholesterol monooxygenase (side-chain-cleaving) activity;                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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cholesterol monooxygenase (side-chain-cleaving) activity; electron carrier activity; heme binding; metal ion binding; monooxygenase activity; oxidoreductase activity, acting on

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