

## Active Recombinant Human CYP3A5 Protein

**Cat. No.** CYP3A5-69H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>Product Overview</b> | Recombinant human CYP3A5 and human CYP-reductase without tag was coexpressed in Escherichia coli, supplemented with purified human cytochrome b5. Amount: 0.5 nmol cytochrome P450                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <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. The encoded protein metabolizes drugs as well as the steroid hormones testosterone and progesterone. This gene is part of a cluster of cytochrome P450 genes on chromosome 7q21.1. Two pseudogenes of this gene have been identified within this cluster on chromosome 7. Expression of this gene is widely variable among populations, and a single nucleotide polymorphism that affects transcript splicing has been associated with susceptibility to hypertension. Alternative splicing results in multiple transcript variants.</p> |
| <b>Bio-activity</b>     | <p>Cytochrome c Reductase Activity: 1095 nmol/min/mg protein</p> <p>P450 Activity Data(Unless otherwise stated, all assays are carried out at 37 centigrade in 100 mM potassium phosphate buffer (pH 7.4) containing 5 mM magnesium chloride and an NADPH generating system [5 mM glucose 6-phosphate, 1 mM NADP+, 1 U/ml glucose 6-phosphate dehydrogenase])</p>                                                                                                                                                                                                                                                                                                                                                                                                                        |

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Activity: Testosterone 6 $\beta$ -hydroxylase

Linear with time up to: 7 min(Determined at 60  $\mu$ M substrate, using a P450 concentration of 5 pmol/ml)

Linear with P450 up to: 25 pmol/ml(Determined at 60  $\mu$ M substrate, using an incubation time of 5 min)

Vmax: 59 pmol/min/pmol CYP

Km: 50  $\mu$ M

#### Usage

For laboratory (research) purposes only.

#### Storage

Store at -80 centigrade. Avoid frequent temperature changes. Thaw on ice.

#### Concentration

P450 Concentration: 1.0 nmol/ml

Cytochrome b5 Concentration: 5.0 nmol/ml

Protein Concentration: 10.0 mg/ml

Specific P450 Content: 100 pmol/mg protein

#### Storage Buffer

50 mM Tris-acetate (pH 7.6), 250 mM sucrose, 0.25 mM EDTA

## GENE INFORMATION

#### Gene Name

CYP3A5 cytochrome P450 family 3 subfamily A member 5 [ Homo sapiens (human) ]

#### Official Symbol

CYP3A5

#### Synonyms

CYP3A5; cytochrome P450 family 3 subfamily A member 5; CP35; PCN3; CYP11A5; P450PCN3; cytochrome P450 3A5; aryl hydrocarbon hydroxylase; cytochrome P450 HLp2; cytochrome P450, family 3, subfamily A, polypeptide 5; cytochrome P450, subfamily IIIA (naphedipine oxidase), polypeptide 5; cytochrome P450-PCN3; flavoprotein-linked monooxygenase; microsomal monooxygenase; xenobiotic monooxygenase; EC 1.14.14.1

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|----------------|-----------|
| Gene ID        | 1577      |
| mRNA Refseq    | NM_000777 |
| Protein Refseq | NP_000768 |
| MIM            | 605325    |
| UniProt ID     | P20815    |

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