# Active Recombinant Human CYP3A5 Protein

**Cat. No.** CYP3A5-82H **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant human CYP3A5 protein and CYP-reductase without tag were coexpressed in E. coli. |
| **Species** | Human |
| **Source** | E.coli |
| **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. 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 hypertensions. Alternative splicing results in multiple transcript variants. |
| **Bio-activity** | Cytochrome c Reductase Activity: 331 nmol/min/mg protein<br>P450 Activity Data(Unless otherwise stated, all assays are carried out at 37 centigrade in 100 mM potassium phosphate buffer (pH 7.4) containing 5mM magnesium chloride and an NADPH generating system [5 mM glucose 6-phosphate, 1 mM NADP+, 1 U/ml glucose 6-phosphate dehydrogenase])<br>Activity: Testosterone 6β-hydroxylase |

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| | Linear with time up to: 15 min(Determined at 60 μM substrate, using a P450 concentration of 12.5 pmol/ml)<br>Linear with P450 up to: 60 pmol/ml(Determined at 60 μM substrate, using an incubation time of 5 min)<br>Vmax: 12 pmol/min/pmol CYP<br>Km: 71 μM |
| **Usage** | For laboratory (research) purposes only |
| **Storage** | Store at -80 centigrade. Avoid frequent temperature changes. Thaw on ice. |
| **Concentration** | P450 Concentration: 2.8 nmol/ml<br>Protein Concentration: 14.5 mg/ml<br>Specific P450 Content: 193 pmol/mg protein |
| **Storage Buffer** | 50 mM Tris-acetate (pH 7.6), 250 mM sucrose, 0.25 mM EDTA |

## GENE INFORMATION

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| **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; CYPIIIA5; P450PCN3; cytochrome P450 3A5; aryl hydrocarbon hydroxylase; cytochrome P450 HLp2; cytochrome P450, family 3, subfamily A, polypeptide 5; cytochrome P450, subfamily IIIA (niphedipine oxidase), polypeptide 5; cytochrome P450-PCN3; flavoprotein-linked monooxygenase; microsomal monooxygenase; xenobiotic monooxygenase |
| **Gene ID** | 1577 |

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| **mRNA Refseq** | NM_000777 |
| **Protein Refseq** | NP_000768 |
| **MIM** | 605325 |
| **UniProt ID** | P20815 |

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