

Active Recombinant Human CYP3A4

Cat. No. CYP3A4-549H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CYP3A4 was expressed in <i>Saccharomyces cerevisiae</i> .
Species	Human
Source	<i>S.Cerevisiae</i>
Description	This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases that catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. This protein localizes to the endoplasmic reticulum and its expression is induced by glucocorticoids and some pharmacological agents. This enzyme is involved in the metabolism of approximately half the drugs in use today, including acetaminophen, codeine, cyclosporin A, diazepam and erythromycin. The enzyme also metabolizes some steroids and carcinogens. This gene is part of a cluster of cytochrome P450 genes on chromosome 7q21.1. Previously another CYP3A gene, CYP3A3, was thought to exist; however, it is now thought that this sequence represents a transcript variant of CYP3A4. Alternatively spliced transcript variants encoding different isoforms have been identified.
Form	50 mM Tris (pH 7.4), 1 mM EDTA, 20% glycerol
Bio-activity	activity: ≥10 units/pmol enzymes secondary activity: ≥20 units/mg protein (Reductase activity)
Unit Definition	P450 Activity: One unit will oxidize 1 picomole of testosterone per minute at pH 7.4 at

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30 °C.Reductase Activity: One unit will reduce 1 nanomole of cytochrome C per minute in the presence of NADPH at pH 7.4 at 28 °C.

Storage ?70°C

Concentration ≤60 mg/mL (Protein)≥10 pmol/mg protein (P450)

GENE INFORMATION

Gene Name CYP3A4 cytochrome P450, family 3, subfamily A, polypeptide 4 [Homo sapiens (human)]

Official Symbol CYP3A4

Synonyms

CYP3A4; HLP; CP33; CP34; CYP3A; NF-25; CYP3A3; P450C3; CYP3A3; CYP3A4; P450PCN1; cytochrome P450, family 3, subfamily A, polypeptide 4; cytochrome P450 3A4; nifedipine oxidase; cytochrome P450 3A3; cytochrome P450 HLP; cytochrome P450-PCN1; cytochrome P450 NF-25; alendazole sulfoxidase; quinine 3-monooxygenase; alendazole monooxygenase; P450-III, steroid inducible; glucocorticoid-inducible P450; 1,8-cineole 2-exo-monooxygenase; taurochenodeoxycholate 6-alpha-hydroxylase; cytochrome P450, subfamily IIIA (nifedipine oxidase), polypeptide 3; cytochrome P450, subfamily IIIA (nifedipine oxidase), polypeptide 4; NP_001189784.1; EC 1.14.13.157; EC 1.14.13.32; EC 1.14.13.67; EC 1.14.13.97; NP_059488.2

Gene ID 1576

mRNA Refseq NM_017460

Protein Refseq NP_059488

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MIM	124010
UniProt ID	P08684
Chromosome Location	7q21.1
Pathway	Aflatoxin B1 metabolism; Biological oxidations; Codeine and morphine metabolism
Function	albendazole monooxygenase activity; caffeine oxidase activity; heme binding

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