Recombinant Human CYP3A4/NADPH reductase protein

Cat. No. CYP3A4-33H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	This is a permeabilized and stabilized dried yeast powder preparation containing recombinant human CYP 3A4 and recombinant human P450 NADPH oxidoreductase co-expressed in the same preparation.
Species	Human
Source	P.pastoris
Form	Lyophilized powder
Molecular Mass	55 Kda
Characteristic	- Co-expresses human CYP3A4 and human P450 oxidoreductase (hCPR) allowing easy reconstitution of the endogenous system- Useful for all the applications as a baculosome system but more cost-effective- Easy to handle dry powder- Very stable in dry form and active in multiple buffers and solvents during long incubations- Addition of NADP+ & Glucose-6-Phosphate are not essential (but will boost T3activity)- After the reaction, the protein can be pelleted at relatively low speeds- Clean HPLC profiles for easy metabolite ID and purification- Highly controlled production process for lot-to-lot reproducibility
Notes	Centrifuge the vial prior to opening
Storage	Stable for 1 year as supplied. Store dry powder at -20 centigrade. Reconstitute in 100 mM Potassium Phosphate buffer, pH 7.7. Not recommended to be stored as solution.

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	If storing as solution, aliquot and store at -80 centigrade. Avoid repeated freeze/thaw cycles and use aliquots within one month (the human CYP3A4 will lose approximately 10% activity per week when stored at -80 centigrade). Thaw aliquots rapidly at 37 centigrade and place on ice until use (thawed aliquots should be used within 4 hours).
Reconstitution	100 mM Potassium Phosphate buffer, pH 7.7

GENE INFORMATION

Gene Name	CYP3A4 cytochrome P450, family 3, subfamily A, polypeptide 4 [Homo sapiens]
Official Symbol	CYP3A4
Synonyms	CYP3A4; cytochrome P450, family 3, subfamily A, polypeptide 4; CYP3A3, cytochrome P450, subfamily IIIA (niphedipine oxidase), polypeptide 4; cytochrome P450 3A4; nifedipine oxidase; cytochrome P450 3A3; cytochrome P450 HLp; cytochrome P450-PCN1; cytochrome P450 NF-25; albendazole sulfoxidase; quinine 3-monooxygenase; albendazole monooxygenase; P450-III, steroid inducible; glucocorticoid-inducible P450; taurochenodeoxycholate 6-alpha-hydroxylase; cytochrome P450, subfamily IIIA (niphedipine oxidase), polypeptide 3; cytochrome P450, subfamily IIIA (niphedipine oxidase), polypeptide 4; HLP; CP33; CP34; CYP3A; NF-25; CYP3A3; P450C3; CYPIIIA3; CYPIIIA4; P450PCN1; MGC126680;
Gene ID	1576
mRNA Refseq	NM_001202855
Protein Refseq	NP_001189784
MIM	124010

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UniProt ID	P08684
Chromosome Location	7q21.1
Pathway	Bile secretion, organism-specific biosystem; Bile secretion, conserved biosystem; Biological oxidations, organism-specific biosystem; Codeine and morphine metabolism, organism-specific biosystem; Cytochrome P450 - arranged by substrate type, organism-specific biosystem; Drug metabolism - cytochrome P450, organism-specific biosystem; Drug metabolism - cytochrome P450, conserved biosystem;
Function	albendazole monooxygenase activity; caffeine oxidase activity; electron carrier activity; enzyme binding; heme binding; iron ion binding; metal ion binding; monooxygenase activity; monooxygenase activity; oxidoreductase activity; oxidoreductase activity, acting on paired donors, with incorporation or reduction of molecular oxygen, reduced flavin or flavoprotein as one donor, and incorporation of one atom of oxygen; oxygen binding; quinine 3-monooxygenase activity; steroid binding; steroid hydroxylase activity; taurochenodeoxycholate 6alpha-hydroxylase activity; testosterone 6-beta-hydroxylase activity; vitamin D 24-hydroxylase activity; vitamin D3 25-hydroxylase activity;

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