Recombinant Human CYP1A2/NADPH protein, Active

Cat. No. CYP1A2-361H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	This is a permeabilized and stabilized dried yeast powder preparation containing recombinant human CYP1A2 and recombinant human P450 NADPH oxidoreductase co expressed in the same preparation.
Species	Human
Source	P.pastoris
Description	Cytochrome P450 1A2 (CYP1A2, EC 1.14.14.1) is a member of the cytochrome P450 monooxidase (CYP) family of microsomal xenobiotic metabolism enzymes. CYPs are membrane-bound hemeproteins responsible for Phase I biotransformation reactions, in which lipophilic drugs and other xenobiotic compounds are converted to more hydrophilic products to facilitate excretion from the body. CYP1A2 metabolizes many antidepressants and antipsychotic drugs, some of its substrates being caffeine, acetaminophen, fluvoxamine and Haloperidol. Expression of CYP1A2 appears to be induced by various dietary constituents like cabbages, cauliflower and broccoli. BioVision's EZCypTM 1A2 is a permeabilized and stabilized dried yeast powder preparation containing recombinant human CYP1A2 and recombinant human P450 NADPH oxidoreductase co expressed in the same preparation.
Form	Lyophilized powder
Molecular Mass	55 Kda
Notes	Centrifuge the vial prior to opening

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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. If storing as solution, aliquot and store at -80 centigrade. Avoid repeated freeze/thaw cycles and use aliquots within one month (the human CYP1A2 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	Reconstitute in 100 mM Potassium Phosphate buffer, pH 7.7.

GENE INFORMATION

Gene Name	CYP1A2 cytochrome P450, family 1, subfamily A, polypeptide 2 [Homo sapiens]
Official Symbol	CYP1A2
Synonyms	CYP1A2; cytochrome P450, family 1, subfamily A, polypeptide 2; cytochrome P450, subfamily I (aromatic compound inducible), polypeptide 2; cytochrome P450 1A2; CP12; P3 450; CYPIA2; P450 form 4; cytochrome P450 4; cytochrome P(3)450; cytochrome P450-P3; dioxin-inducible P3-450; microsomal monooxygenase; xenobiotic monooxygenase; aryl hydrocarbon hydroxylase; flavoprotein-linked monooxygenase; cytochrome P450, subfamily I (aromatic compound-inducible), polypeptide 2; P3-450; P450(PA);
Gene ID	1544
mRNA Refseq	NM_000761
Protein Refseq	NP_000752
MIM	124060

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UniProt ID	P05177
Chromosome Location	15q24.1
Pathway	Aromatic amines can be N-hydroxylated or N-dealkylated by CYP1A2, organism-specific biosystem; Biological oxidations, organism-specific biosystem; Caffeine metabolism, organism-specific biosystem; Caffeine metabolism, conserved biosystem; Cytochrome P450 - arranged by substrate type, organism-specific biosystem; Drug metabolism - cytochrome P450, organism-specific biosystem; Drug metabolism - cytochrome P450, conserved biosystem;
Function	aromatase activity; caffeine oxidase activity; demethylase activity; electron carrier activity; enzyme binding; heme binding; metal ion binding; 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;

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