

EZCyp™ Active human Cytochrome P450 1A2

CATALOG #: 7876-10 10 mg
7876-50 50 mg

ALTERNATIVE NAMES: Cytochrome P450 1A2, Microsomal cytochrome P450 1A2, CYP1A2, Cyt1A2

SOURCE: *Pichia pastoris* co-expressing NADPH-Reductase

FORM: Dry powder

STORAGE: Stable for 1 year as supplied. Store dry powder at -20°C. 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°C. 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°C). Thaw aliquots rapidly at 37°C and place on ice until use (thawed aliquots should be used within 4 hours).

BACKGROUND: 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 heme proteins 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 EZCyp™ 1A2 is a permeabilized and stabilized dried yeast powder preparation containing recombinant human CYP1A2 and recombinant human P450 NADPH oxidoreductase (CPR, EC 1.6.2.4) co expressed in the same preparation.

Advantages of the BioVision EZCyp™ 1A2:

- Co-expresses human CYP1A2 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 activity)
- 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

Kinetics of Fluorogenic Substrate Metabolism by Recombinant hCYP1A2 / hCPR in *Pichia pastoris* Microsomes

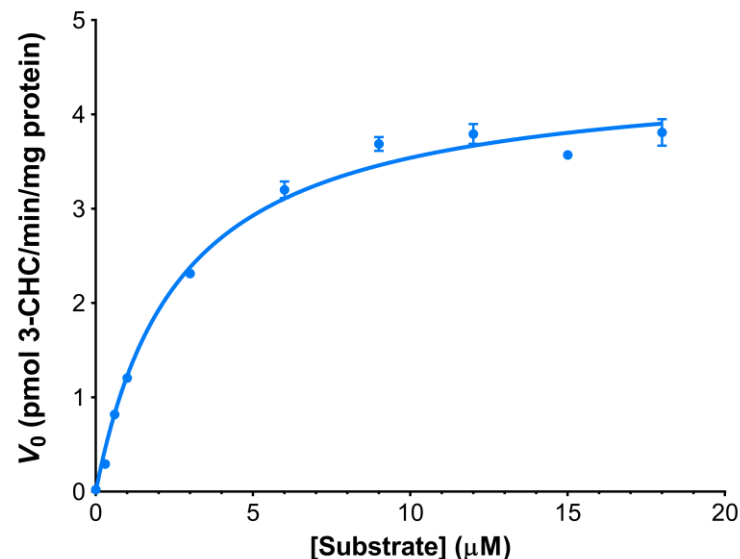


Fig: Activity of recombinant human CYP1A2 using the Cytochrome P450 1A2 (CYP1A2) Activity Assay Kit (Fluorometric) (K893-100).

RELATED PRODUCTS:

- α-naphthoflavone (2918)
- Caffeine (2914)
- Cytochrome P450 1A2 (CYP1A2) Activity Assay Kit (Fluorometric) (K852-100)
- Cytochrome P450 1A2 (CYP1A2) Inhibitor Screening Kit (Fluorometric) (K853-100)
- Cytochrome P450 Antibody (Cat. No. 3084R-100)
- Cytochrome P450 Blocking Peptide (Cat. No. 3084RBP-50)
- EZCyp™ Active human Cytochrome P450 3A4 (7872)
- EZCyp™ Active human Cytochrome P450 2D6 (7873)
- EZCyp™ Active human Cytochrome P450 2C19 (7874)
- EZCyp™ Active human Cytochrome P450 2C9 (7875)

For Research Use Only! Not to be used in humans.