

## EZCyp™ Active human Cytochrome P450 2C9

CATALOG #: 7875-10 10 mg  
7875-50 50 mg

ALTERNATIVE NAMES: Cytochrome P450 2C9, Microsomal cytochrome P450 2C9, CYP2C9, Cyt2C9

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

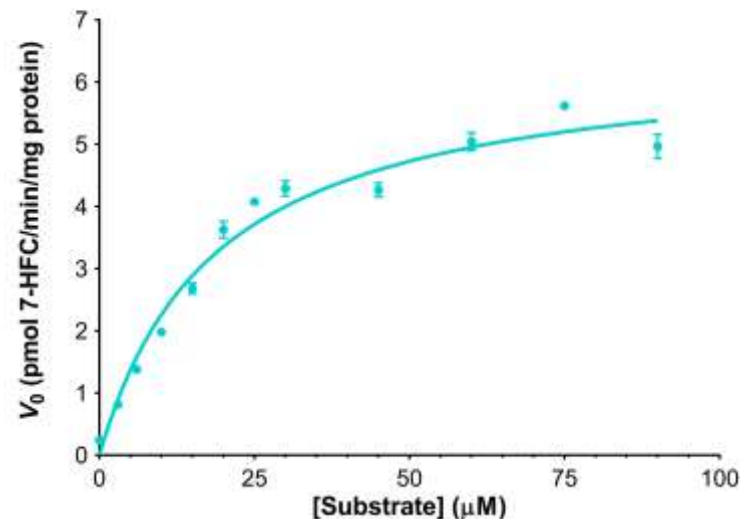
FORM: Dry powder

**STORAGE:** Stable for 1 year as supplied. Store dry powder at -20°C. Reconstitute in 25 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 CYP2C9 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 2C9 (CYP2C9, 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. In the liver, this enzyme contributes to the wide pharmacokinetic variability of the metabolism of drugs such as S-warfarin, diclofenac, phenytoin, tolbutamide and losartan. CYP2C9 gene is highly polymorphic. More than 50 single nucleotide polymorphisms (SNPs) have been described in the regulatory and coding regions of the CYP2C9 gene, some of which are associated with reduced enzyme activity compared with wild type in vitro. Extrahepatic CYP2C9 often metabolizes endogenous compounds such as arachidonic acid, 5-hydroxytryptamine, and linoleic acid. BioVision's EZCyp™ 2C9 is a permeabilized and stabilized dried yeast powder preparation containing recombinant human CYP2C9 and recombinant human P450 NADPH oxidoreductase (CPR, EC 1.6.2.4) co expressed in the same preparation.

**Advantages** of the BioVision EZCyp™ 2C9:

- Co-expresses human CYP2C9 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

Kinetics of Fluorogenic Substrate Metabolism by Recombinant hCYP2C9 / hCPR in *Pichia pastoris* Microsomes

**Fig:** Activity of recombinant human CYP2C9 using the Cytochrome P450 2C9 (CYP2C9) Activity Assay Kit (Fluorometric) (K850-100).

**RELATED PRODUCTS:**

- Avasimibe (9506)
- Cytochrome P450 2C9 (CYP2C9) Activity Assay Kit (Fluorometric) (K850-100)
- Cytochrome P450 2C9 (CYP2C9) Inhibitor Screening Kit (Fluorometric) (K851-100)
- 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 1A2 (7876)
- (S)-(+)-N-3-Benzylrinvanol (2920)
- Ticlopidine hydrochloride (2919)
- Hyperforin. DCHA (2153)

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