

EZCyp™ Active human Cytochrome P450 2C19

CATALOG #: 7874-10 10 mg
7874-50 50 mg

ALTERNATIVE NAMES: Cytochrome P450 2C19, Microsomal cytochrome P450 2C19, CYP2C19, Cyt2C19

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 50 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 CYP2C19 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 2C19 (CYP2C19, 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. CYP2C19 is primarily expressed in liver and intestinal tissue and catalyzes oxidation of neutral or weakly basic lipophilic molecules with 2-3 hydrogen bond donor/acceptor sites. Isoforms of the CYP2C subfamily are responsible for metabolism of nearly 20% of all small molecule drugs commonly used by humans. Polymorphisms in the human CYP2C19 gene have been implicated in clinical drug/drug interactions involving widely-prescribed drugs, including proton pump inhibitors, antiplatelet agents and anticonvulsants. BioVision's EZCyp™ 2C19 is a permeabilized and stabilized dried yeast powder preparation containing recombinant human CYP2C19 and recombinant human P450 NADPH oxidoreductase (CPR, EC 1.6.2.4) co expressed in the same preparation.

Advantages of the BioVision EZCyp™ 2C19:

- Co-expresses human CYP2C19 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 hCYP2C19 / hCPR in *Pichia pastoris* Microsomes

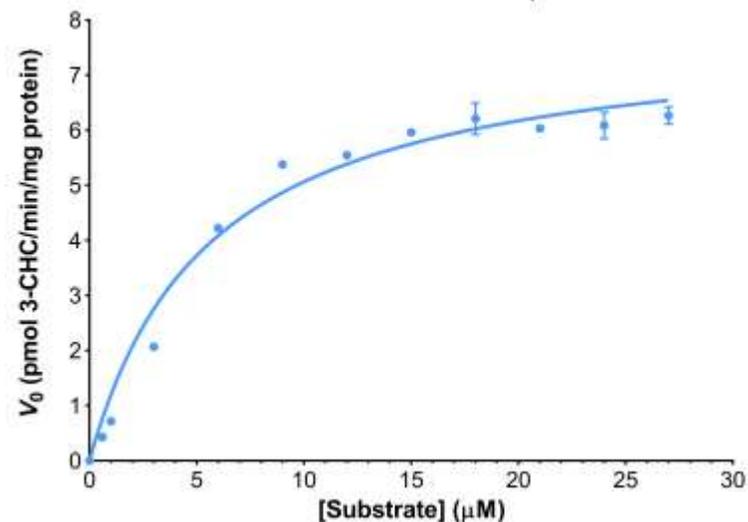


Fig: Activity of recombinant human CYP2C19 using the Cytochrome P450 2C19 (CYP2C19) Activity Assay Kit (Fluorometric) (K848-100).

RELATED PRODUCTS:

- Cytochrome P450 2C19 (CYP2C19) Activity Assay Kit (Fluorometric) (K848-100)
- Cytochrome P450 2C19 (CYP2C19) Inhibitor Screening Kit (Fluorometric) (K849-100)
- 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 2C9 (7875)
- EZCyp™ Active human Cytochrome P450 1A2 (7876)
- (S)-(+)-N-3-Benzylirivanol (2920)
- Ticlopidine hydrochloride (2919)

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