

Recombinant Human CYP2C9

Cat. No. CYP2C9-537H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CYP2C9 allele expressed in <i>insect cells</i> is the most common in human populations studied to date and contains Arg, Ile and Gly at positions 144, 359 and 475 respectively.
Species	Human
Source	Insect Cells
Description	CYP2C9 is an important cytochrome P450 enzyme with a major role in the oxidation of both xenobiotic and endogenous compounds. CYP2C9 makes up about 18% of the cytochrome P450 protein in liver microsomes. Some 100 therapeutic drugs are metabolized by CYP2C9, including drugs with a narrow therapeutic index such as warfarin and phenytoin and other routinely prescribed drugs such as acenocoumarol, tolbutamide, losartan, glipizide, and some nonsteroidal anti-inflammatory drugs.
Protein Concentration	5.5 mg/mL as determined using the BCA assay. Buffer: 100 mM potassium phosphate (pH 7.5), 20% (v/v) glycerol, 0.1 mM EDTA, 1 mM DTT.
Specific Content	200 pmol spectral P450 per milligram of protein Cytochrome.
Reductase Activity	1.19 μ mol of cytochrome c reduced per minute per milligram of protein.
Hydroxylase Activity	6.6 $\pm$ 0.881 nmol/min/mg of protein. Diclofenac hydroxylation reactions were performed for 10 minutes at 37°C. Reactions were carried out in the presence of 0.1 M Tris HCl (pH 7.5), 100 μ M diclofenac, 2 mM NADPH, and at a final protein concentration of

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

100 µg/mL. The reactions were stopped by addition of 20 µL acetonitrile/glacial acetic acid (96:4).

Storage -80°C; Avoid multiple freeze-thaws.

Safety Precautions Normal precautions exercised in handling laboratory reagents should be followed. The chemical, physical, and toxicological properties of these products may not, as yet, have been thoroughly investigated. We recommend the use of gloves, lab coats, and eye protection when working with any chemical reagents.

GENE INFORMATION

Gene Name CYP2C9 cytochrome P450, family 2, subfamily C, polypeptide 9 [Homo sapiens]

Synonyms CYP2C9; cytochrome P450, family 2, subfamily C, polypeptide 9; CPC9; CYP2C; CYP2C10; MGC88320; P450IIC9; MGC149605; cytochrome P450 2C9; CYPIIC9; cytochrome P-450MP; cytochrome p4502C9; cytochrome P450 MP-4; cytochrome P450 MP-8; cytochrome P450 PB-1; cytochrome P450, subfamily IIC (mephenytoin 4-hydroxylase), polypeptide 9; cytochrome P450, subfamily IIC (mephenytoin 4-hydroxylase), polypeptide 10; EC 1.14.13.48; EC 1.14.13.49; EC 1.14.13.80

Gene ID 1559

mRNA Refseq NM_000771

Protein Refseq NP_000762

MIM 601130

UniProt ID P11712

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Chromosome Location	10q24
Pathway	Arachidonic acid metabolism; Drug metabolism - cytochrome P450; Linoleic acid metabolism; Metabolic pathways; Metabolism of xenobiotics by cytochrome P450; Retinol metabolism
Function	(S)-limonene 6-monooxygenase activity; (S)-limonene 7-monooxygenase activity; 4-hydroxyacetophenone monooxygenase activity; caffeine oxidase activity; electron carrier activity; monooxygenase activity; oxidoreductase activity; steroid hydroxylase activity
Ribbon diagram of CYP2C9.	