

## Active Recombinant Human CYP2C9 Protein

Cat. No. CYP2C9-74H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant human CYP2C9 protein and CYP-reductase without tag were coexpressed in E. coli.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>Description</b>	<p>This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids.</p> <p>This protein localizes to the endoplasmic reticulum and its expression is induced by rifampin. The enzyme is known to metabolize many xenobiotics, including phenytoin, tolbutamide, ibuprofen and S-warfarin. Studies identifying individuals who are poor metabolizers of phenytoin and tolbutamide suggest that this gene is polymorphic. The gene is located within a cluster of cytochrome P450 genes on chromosome 10q24.</p>
<b>Bio-activity</b>	<p>Cytochrome c Reductase Activity: 283 nmol/min/mg protein</p> <p>P450 Activity Data(Unless otherwise stated, all assays are carried out at 37 centigrade in 50 mM potassium phosphate buffer (pH 7.4) containing 5mM magnesium chloride and an NADPH generating system [5 mM glucose 6-phosphate, 1 mM NADP+, 1 U/ml glucose 6-phosphate dehydrogenase])</p> <p>Activity: Diclofenac 4'-hydroxylase</p> <p>Linear with time up to: 15 min(Determined at 2.5 μM substrate, using a P450 concentration of 10 pmol/ml)</p>

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Linear with P450 up to: 25 pmol/ml(Determined at 2.5  $\mu$ M substrate, using an incubation time of 5 min)  
Vmax: 20 pmol/min/pmol CYP  
Km: 1.8  $\mu$ M

**Usage** For laboratory (research) purposes only

**Storage** Store at -80 centigrade. Avoid frequent temperature changes. Thaw on ice.

**Concentration** P450 Concentration: 4.5 nmol/ml  
Protein Concentration: 9.9 mg/ml  
Specific P450 Content: 455 pmol/mg protein

**Storage Buffer** 50 mM Tris-acetate (pH 7.6), 250 mM sucrose, 0.25 mM EDTA

## GENE INFORMATION

**Gene Name** CYP2C9 cytochrome P450 family 2 subfamily C member 9 [ Homo sapiens (human) ]

**Official Symbol** CYP2C9

**Synonyms** CYP2C9; cytochrome P450 family 2 subfamily C member 9; CPC9; CYP2C; CYP2C10; CYP11C9; P45011C9; cytochrome P450 2C9; cytochrome P-450 S-mephenytoin 4-hydroxylase; cytochrome P-450MP; cytochrome P450 PB-1; cytochrome P450, family 2, subfamily C, polypeptide 9; flavoprotein-linked monooxygenase; microsomal monooxygenase; xenobiotic monooxygenase

**Gene ID** 1559

**mRNA Refseq** NM\_000771

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**Protein Refseq** [NP\\_000762](#)

**MIM** [601130](#)

**UniProt ID** [P11712](#)

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