

## Active Recombinant Human CYP2C8 Protein

**Cat. No.** CYP2C8-14H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>Product Overview</b> | <p>Recombinant human CYP2C8 and human CYP-reductase without tag was coexpressed in Escherichia coli.</p> <p>Amount: 0.5 nmol cytochrome P450</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <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. This protein localizes to the endoplasmic reticulum and its expression is induced by phenobarbital. The enzyme is known to metabolize many xenobiotics, including the anticonvulsive drug mephenytoin, benzo(a)pyrene, 7-ethoxycoumarin, and the anti-cancer drug taxol. This gene is located within a cluster of cytochrome P450 genes on chromosome 10q24. Several transcript variants encoding a few different isoforms have been found for this gene.</p> |
| <b>Bio-activity</b>     | <p>Cytochrome c Reductase Activity: 200 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 5 mM 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: Paclitaxel 6α-hydroxylase</p>                                                                                                                                                                                                                                                                                                    |

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Linear with time up to: 10 min(Determined at 4  $\mu$ M substrate, using a P450 concentration of 10 pmol/ml)  
 Linear with P450 up to: 60 pmol/ml(Determined at 4  $\mu$ M substrate, using an incubation time of 5 min)  
 Vmax: 7.7 pmol/min/pmol CYP  
 Km: 7.0  $\mu$ M

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

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

**Concentration**  
 P450 Concentration: 1.0 nmol/ml  
 Protein Concentration: 10.0 mg/ml  
 Specific P450 Content: 100 pmol/mg protein

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

## GENE INFORMATION

**Gene Name** CYP2C8 cytochrome P450 family 2 subfamily C member 8 [ Homo sapiens (human) ]

**Official Symbol** CYP2C8

**Synonyms** CYP2C8; cytochrome P450 family 2 subfamily C member 8; CPC8; CYP11C8; CYP2C8DM; MP-12/MP-20; cytochrome P450 2C8; P450 form 1; cytochrome P450 IIC2; cytochrome P450 MP-12; cytochrome P450 MP-20; cytochrome P450 form 1; cytochrome P450, family 2, subfamily C, polypeptide 8; cytochrome P450, subfamily IIC (mephenytoin 4-hydroxylase), polypeptide 8; flavoprotein-linked monooxygenase; microsomal monooxygenase; s-mephenytoin 4-hydroxylase; xenobiotic monooxygenase; EC 1.14.14.1

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|----------------|-----------|
| Gene ID        | 1558      |
| mRNA Refseq    | NM_000770 |
| Protein Refseq | NP_000761 |
| MIM            | 601129    |
| UniProt ID     | P10632    |

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