

## Active Recombinant Human CYP2C19 (I331V)

**Cat. No.** CYP2C19-540H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <b>Product Overview</b> | Recombinant Human CYP2C19 (I331V) was expressed 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. This protein localizes to the endoplasmic reticulum and is known to metabolize many xenobiotics, including the anticonvulsive drug mephenytoin, omeprazole, diazepam and some barbiturates. Polymorphism within this gene is associated with variable ability to metabolize mephenytoin, known as the poor metabolizer and extensive metabolizer phenotypes. The gene is located within a cluster of cytochrome P450 genes on chromosome 10q24.</p> |
| <b>Bio-activity</b>     | 12-110 units/mg protein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Molecular Mass</b>   | mol wt 54783.3 g/mol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Unit Definition</b>  | One unit will convert 1.0 nanomole of omeprazole (6-methoxy-2-[(4-methoxy-3,5-dimethylpyridin-2-yl)methylsulfinyl]-1H-benzimidazole) to 5-hydroxyomeprazole per minute at pH 7.4 at 37 °C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Storage</b>          | -70°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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|                      |                                                                                            |
|----------------------|--------------------------------------------------------------------------------------------|
| <b>Concentration</b> | 3.2-25 mg protein/mL (protein)50-150 nmol/mL (P450)6-14 nmol/mg protein (specific content) |
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## GENE INFORMATION

|                  |                                                                                         |
|------------------|-----------------------------------------------------------------------------------------|
| <b>Gene Name</b> | CYP2C19 cytochrome P450, family 2, subfamily C, polypeptide 19 [ Homo sapiens (human) ] |
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|                        |         |
|------------------------|---------|
| <b>Official Symbol</b> | CYP2C19 |
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|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Synonyms</b> | CYP2C19; CPCJ; CYP2C; P450C2C; P450IIC19; cytochrome P450, family 2, subfamily C, polypeptide 19; cytochrome P450 2C19; CYP11C17; CYP11C19; cytochrome P450-11A; cytochrome P450-254C; cytochrome P-450 II C; microsomal monooxygenase; xenobiotic monooxygenase; mephenytoin 4-hydroxylase; mephenytoin 4"-hydroxylase; S-mephenytoin 4-hydroxylase; (R)-limonene 6-monooxygenase; (S)-limonene 6-monooxygenase; (S)-limonene 7-monooxygenase; flavoprotein-linked monooxygenase; cytochrome P450, subfamily IIC (mephenytoin 4-hydroxylase), polypeptide 19; NP_000760.1; EC 1.14.13.48; EC 1.14.13.49; EC 1.14.13.80 |
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| <b>Gene ID</b> | 1557 |
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| <b>mRNA Refseq</b> | NM_000769 |
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|                       |           |
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| <b>Protein Refseq</b> | NP_000760 |
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| <b>MIM</b> | 124020 |
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| <b>UniProt ID</b> | P33261 |
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|                   |       |
|-------------------|-------|
| <b>Chromosome</b> | 10q24 |
|-------------------|-------|

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|          |                                                                         |
|----------|-------------------------------------------------------------------------|
| Location |                                                                         |
| Pathway  | Arachidonic acid metabolism; CYP2E1 reactions; Linoleic acid metabolism |
| Function | (R)-limonene 6-monooxygenase activity; enzyme binding; iron ion binding |

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