

# Active Recombinant Rat Cyp2d4 Protein

**Cat. No.** Cyp2d4-139R    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Product Overview</b> | <p>Recombinant rat CYP2D18 protein and CYP-reductase without tag were coexpressed in E. coli.</p> <p>Amount: 1 nmol cytochrome P450.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Species</b>          | Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | Has N-demethylation activity toward the antidepressant imipramine                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Bio-activity</b>     | <p>Cytochrome c Reductase Activity: 1531 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: Dextromethorphan O-demethylase</p> <p>Linear with time up to: 6 min(Determined at 15 <math>\mu</math>M substrate, using a P450 concentration of 20 pmol/ml)</p> <p>Linear with P450 up to: 40 pmol/ml(Determined at 15 <math>\mu</math>M substrate, using an incubation time of 5 min)</p> <p>Vmax: 5.1 pmol/min/pmol CYP</p> <p>Km: 39 <math>\mu</math>M</p> |
| <b>Usage</b>            | For laboratory (research) purposes only                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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| <b>Storage</b>          | Store at -80 centigrade. Avoid frequent temperature changes. Thaw on ice.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Concentration</b>    | P450 Concentration: 2.4 nmol/ml<br>Protein Concentration: 11.3 mg/ml<br>Specific P450 Content: 212 pmol/mg protein                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Storage Buffer</b>   | 50 mM Tris-acetate (pH 7.6), 250 mM sucrose, 0.25 mM EDTA                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>GENE INFORMATION</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Gene Name</b>        | Cyp2d4 cytochrome P450, family 2, subfamily d, polypeptide 4 [ <i>Rattus norvegicus</i> (Norway rat) ]                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Official Symbol</b>  | Cyp2d4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Synonyms</b>         | Cyp2d4; cytochrome P450, family 2, subfamily d, polypeptide 4; Cyp2d6; Cyp2d18; Cyp2d22; Cyp2d4v1; Cyp2d4v2; cytochrome P450 2D4; CYP11D18; CYP11D4; Cytochrome P450, subfamily IID4; P450 2D-29/2D-35; P450-CMF3; P450-DB4; cytochrome P450 2D-29; cytochrome P450 2D-35; cytochrome P450 2d18; cytochrome P450, family 2, subfamily d, polypeptide 22; cytochrome P450, subfamily 2D, polypeptide 6; cytochrome P450, subfamily IID, polypeptide 6; cytochrome P450-CMF3; cytochrome P450-DB4; debrisoquine 4-hydroxylase |
| <b>Gene ID</b>          | 171522                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>mRNA Refseq</b>      | NM_138515                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Protein Refseq</b>   | NP_612524                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>UniProt ID</b>       | Q64680                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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