

Active Recombinant Human CYP2C19 Protein

Cat. No. CYP2C19-75H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant human CYP2C19 protein and human CYP-reductase without tag were coexpressed in E. coli.
Species	Human
Source	E.coli
Description	<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>
Bio-activity	<p>Cytochrome c Reductase Activity: 1284 nmol/min/mg protein 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]) Activity: Diazepam N-demethylase Linear with time up to: 15 min(Determined at 20 μM substrate, using a P450</p>

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concentration of 25 pmol/ml)
 Linear with P450 up to: 100 pmol/ml(Determined at 20 μ M substrate, using an incubation time of 5 min)
 Vmax: 2.6 pmol/min/pmol CYP
 Km: 19 μ M

Usage For laboratory (research) purposes only

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

Concentration P450 Concentration: 3.7 nmol/ml
 Protein Concentration: 18.3 mg/ml
 Specific P450 Content: 202 pmol/mg protein

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

GENE INFORMATION

Gene Name CYP2C19 cytochrome P450 family 2 subfamily C member 19 [Homo sapiens (human)]

Official Symbol CYP2C19

Synonyms CYP2C19; cytochrome P450 family 2 subfamily C member 19; CPCJ; CYP2C; P450C2C; CYPIIC17; CYPIIC19; P450IIC19; cytochrome P450 2C19; (R)-limonene 6-monooxygenase; (S)-limonene 6-monooxygenase; (S)-limonene 7-monooxygenase; S-mephenytoin 4-hydroxylase; cytochrome P-450 II C; cytochrome P450, family 2, subfamily C, polypeptide 19; cytochrome P450, subfamily IIC (mephenytoin 4-hydroxylase), polypeptide 19; cytochrome P450-11A; cytochrome P450-254C; fenbendazole monooxygenase (4'-hydroxylating); flavoprotein-linked monooxygenase; mephenytoin 4'-hydroxylase; mephenytoin 4-hydroxylase;

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microsomal monooxygenase; xenobiotic monooxygenase

Gene ID 1557

mRNA Refseq NM_000769

Protein Refseq NP_000760

MIM 124020

UniProt ID P33261

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