Active Recombinant Human CYP2C19 Protein

Cat. No. CYP2C19-33H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human CYP2C19 and human CYP-reductase without tag was coexpressed in Escherichia coli. Amount: 0.5 nmol cytochrome P450
Species	Human
Source	E.coli
Description	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.
Bio-activity	Cytochrome c Reductase Activity: 361 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 5 mM 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

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	Linear with time up to: 15 min(Determined at 20 μM substrate, using a P450 concentration of 25 pmol/ml) Linear with P450 up to: 60 pmol/ml(Determined at 20 μM substrate, using an incubation time of 5 min) Vmax: 3.7 pmol/min/pmol CYP Km: 26 μM
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	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

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	monooxygenase; mephenytoin 4'-hydroxylase; mephenytoin 4-hydroxylase; microsomal monooxygenase; xenobiotic monooxygenase; EC 1.14.14.1; EC 1.14.14.51; EC 1.14.14.52; EC 1.14.14.53; EC 1.14.14.75
Gene ID	1557
mRNA Refseq	NM_000769
Protein Refseq	NP_000760
MIM	124020
UniProt ID	P33261

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA