

Active Recombinant Human CYP17A1 Protein

Cat. No. CYP17A1-02H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human CYP17A1 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. It has both 17α-hydroxylase and 17,20-lyase activities and is a key enzyme in the steroidogenic pathway that produces progestins, mineralocorticoids, glucocorticoids, androgens, and estrogens. Mutations in this gene are associated with isolated steroid-17 α-hydroxylase deficiency, 17-α-hydroxylase/17,20-lyase deficiency, pseudohermaphroditism, and adrenal hyperplasia.
Bio-activity	Cytochrome c Reductase Activity: 25 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: Progesterone 17α-hydroxylase

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Linear with time up to: 30 min(Determined at 2 μ M substrate, using a P450 concentration of 10 pmol/ml)
 Linear with P450 up to: 20 pmol/ml(Determined at 2 μ M substrate, using an incubation time of 5 min)
 Vmax: 2.5 pmol/min/pmol CYP
 Km: 0.19 μ 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 CYP17A1 cytochrome P450 family 17 subfamily A member 1 [Homo sapiens (human)]

Official Symbol CYP17A1

Synonyms CYP17A1; cytochrome P450 family 17 subfamily A member 1; CPT7; CYP17; S17AH; P450C17; steroid 17-alpha-hydroxylase/17,20 lyase; 17-alpha-hydroxyprogesterone aldolase; CYPXVII; cytochrome P450 17A1; cytochrome P450, family 17, subfamily A, polypeptide 1; cytochrome P450, subfamily XVII (steroid 17-alpha-hydroxylase), adrenal hyperplasia; cytochrome P450-C17; cytochrome P450c17; cytochrome p450 XVIIA1; steroid 17-alpha-monooxygenase; EC 1.14.14.19; EC 1.14.14.32

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Gene ID	1586
mRNA Refseq	NM_000102
Protein Refseq	NP_000093
MIM	609300
UniProt ID	P05093

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