

APC016Hu01 100µg
Active Cytochrome P450 17A1 (CYP17A1)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Cys183~Thr508

Tags: N-terminal His-tag

Purity: >90%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 5.6

Predicted Molecular Mass: 40.6kDa

Accurate Molecular Mass: 40kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

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CFNTSYKNGDPELNVIQNYNEGIIDNLSKDSLVDLVPWLKIFPNKTLEKLSHVKIRNDLLNKILENYK
EKFRSDSITNMLDTLMQAKMNSDNGNAGPDQDSELLSDNHILTTIGDIFGAGVETTTSVVKWTLAFLH
NPQVKKKLYEEIDQNVGFSRTPTISDRNRLLEATIREVLRRLRPVAPMLIPHKANVDSSIGFAVDKG
TEVIINLWALHHNEKEWHQPDQFMPEFLNPAQTQLISPSVSYLPFGAGPRSCIGEILARQELFLIMAW
LLQRFDLEVPDDGQLPSLEGIPKVVFLIDSFKVKIKVRQAWREAQAEGST
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[ACTIVITY]

Microsomal human cytochrome P450 17A1 (CYP17A1, 17 α -hydroxylase, 17,20-lyase) belongs to the cytochrome P450 super family, is expressed in the adrenals and gonads, with minor amounts in the brain, placenta, and heart. CYP17A1 enzyme operates at a key juncture of human steroidogenesis, controlling the levels of mineralocorticoids influencing blood pressure, glucocorticoids involved in immune and stress responses, and androgens and estrogens involved in development and homeostasis of reproductive tissues. Receptor Tyrosine Protein Kinase erbB-2 (ErbB2) has been identified as an interactor of CYP17A1, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human CYP17A1 and recombinant human ErbB2. Briefly, CYP17A1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to ErbB2-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-CYP17A1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37°C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were

incubated 15-25 minutes at 37°C. Finally, add 50 µL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human CYP17A1 and recombinant human ErbB2 was shown in Figure 1, the EC50 for this effect is 0.03 µg/mL.

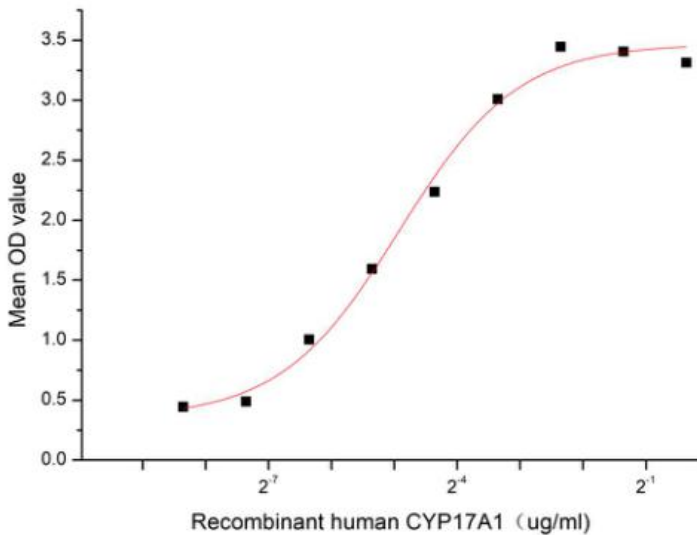


Figure 1. The binding activity of recombinant human CYP17A1 and recombinant human ErbB2

[IDENTIFICATION]

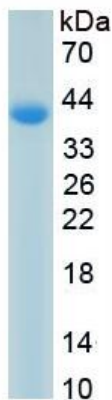


Figure 2. SDS-PAGE

Sample: Active recombinant CYP17A1, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.