

## Cytochrome P450 17A1 (CYP17A1) Active Protein | CYP17A1 active protein

Active Cytochrome P450 17A1 (CYP17A1)

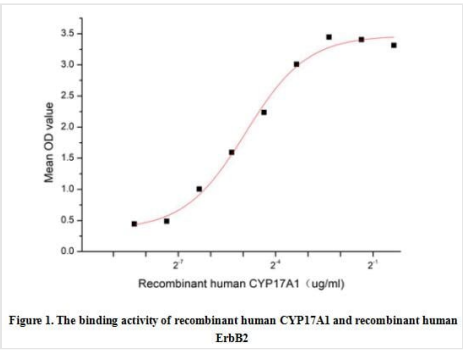
| CATALOG # | HOST   | APPLICATIONS                 |
|-----------|--------|------------------------------|
| AAA161874 | E Coli | Activity Assay, Cell Culture |

### PRODUCT SYNONYMS

Cytochrome P450 17A1 (CYP17A1); Active Cytochrome P450 17A1 (CYP17A1); Cytochrome P450 17A1; S17aH; CPT7; P450C17; 17-Alpha-Hydroxylase; 17-alpha-hydroxyprogesterone aldolase/17; 20-Lyase; Steroid 17-alpha-monooxygenase; Cytochrome P450; Family 17; Subfamily A; Polypeptide 14; CYP17A1 active protein

### PRODUCT SPECIFICATIONS

|                                                    |                                                                                                                               |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Host                                               | E Coli                                                                                                                        |
| Purity/Purification                                | Greater than 90% by SDS-PAGE                                                                                                  |
| Form/Format                                        | Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.                                  |
| Sequence                                           | Cys183~Thr 508                                                                                                                |
| Applicable Applications for CYP17A1 active protein | Activity Assay, Cell Culture                                                                                                  |
| Species                                            | Human                                                                                                                         |
| Expression System                                  | Prokaryotic expression                                                                                                        |
| Tag                                                | N-terminal His Tag                                                                                                            |
| Endotoxin Level                                    | <1.0EU per 1ug (determined by the LAL method)                                                                                 |
| Isoelectric Point                                  | 5.6                                                                                                                           |
| Research Area                                      | Enzyme & Kinase, Metabolic pathway, Endocrinology, Cardiovascular biology, Hepatology, Gastroenterology, Nutrition metabolism |
| Preparation and Storage                            | Store at 2-8 degree C for one month, -80 degree C for 12 months                                                               |

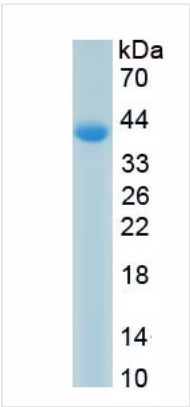


Bioactivity

Microsomal human cytochrome P450 17A1 (CYP17A1, 17alpha-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 ul were then transferred to ErbB2-coated microtiter wells and incubated for 1h at 37 degree 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 degree C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50 uL 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 ug/mL.

SDS-PAGE

Figure. SDS-PAGE



ADDITIONAL INFORMATION

|                                                      |                 |
|------------------------------------------------------|-----------------|
| Product Categories/Family for CYP17A1 active protein | Active proteins |
|------------------------------------------------------|-----------------|

NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                                                                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 4503195                                                                                                                                                                                                                                                         |
| NCBI GeneID                      | 1586                                                                                                                                                                                                                                                            |
| NCBI Accession #                 | NP_000093.1                                                                                                                                                                                                                                                     |
| NCBI GenBank Nucleotide #        | NM_000102.3                                                                                                                                                                                                                                                     |
| UniProt Accession #              | P05093; Q5TZV7                                                                                                                                                                                                                                                  |
| Molecular Weight                 | 57,371 Da                                                                                                                                                                                                                                                       |
| NCBI Official Full Name          | steroid 17-alpha-hydroxylase/17,20 lyase                                                                                                                                                                                                                        |
| NCBI Official Synonym Full Names | cytochrome P450, family 17, subfamily A, polypeptide 1                                                                                                                                                                                                          |
| NCBI Official Symbol             | CYP17A1                                                                                                                                                                                                                                                         |
| NCBI Official Synonym Symbols    | CPT7; CYP17; S17AH; P450C17                                                                                                                                                                                                                                     |
| NCBI Protein Information         | steroid 17-alpha-hydroxylase/17,20 lyase; CYPXVII; cytochrome P450c17; cytochrome P450-C17; cytochrome P450 17A1; cytochrome p450 XVIIA1; steroid 17-alpha-monooxygenase; 17-alpha-hydroxyprogesterone aldolase; cytochrome P450, subfamily XVII (steroid 17-al |
| UniProt Protein Name             | Steroid 17-alpha-hydroxylase/17,20 lyase                                                                                                                                                                                                                        |
| UniProt Gene Name                | CYP17A1                                                                                                                                                                                                                                                         |

|                            |                                  |
|----------------------------|----------------------------------|
| UniProt Synonym Gene Names | CYP17; S17AH; Cytochrome P450c17 |
| UniProt Entry Name         | CP17A_HUMAN                      |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/cytochrome-p450-17a1-cyp17a1/161874>