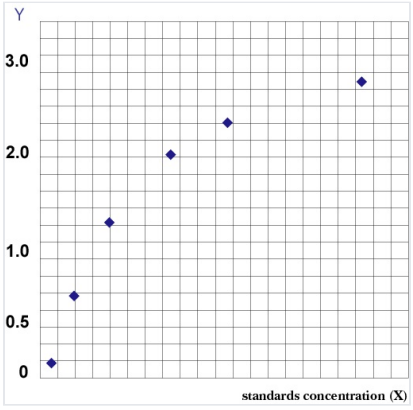
# Cytochrome P450 21 (CYP21A2) ELISA Kit for Human

## PRODUCT OVERVIEW

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| **Product Name** | Cytochrome P450 21 (CYP21A2), ELISA Kit |
| **Full Product Name** | Human Cytochrome P450 21 ELISA Kit |
| **Product Gene Name** | CYP21A2 elisa kit |
| **Species Reactivity** | Human |
| **Assay Type** | Sandwich |
| **Samples** | Serum, plasma, cell culture supernate and other biological fluids |
| **Detection Range** | 6.25 pg/ml-100 pg/ml |
| **Sensitivity** | 0.1 pg/ml |
| **OMIM** | 201910 |
| **3D Structure** | ModBase 3D Structure for P08686 |
| **Production Time** | Due to severe delay and raw materials shortage, production time may takes between 5-8 weeks. |
| **Related Product Information for CYP21A2 elisa kit** | Intended Use: The Stop Solution changes the color from blue to yellow and the intensity of the color is measured at 450 nm using a spectrophotometer. In order to measure the concentration ofCYTOCHROME P450 in the sample, This CYTOCHROME P450 ELISA Kit includes a set of calibration standards. The calibration standards are assayed at the same time as the samples and allow the operator to produce a standard curve of Optical Density versusCYTOCHROME P450 concentration. The concentration ofCYTOCHROME P450 in the samples is then determined by comparing the O.D. of the samples to the standard curve. |
| **Other Notes** | Small volumes of CYP21A2 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for CYP21A2 purchase** | MBS3805018 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cytochrome P450 21 (CYP21A2) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing CYP21A2. The ELISA analytical biochemical technique of the MBS3805018 kit is based on CYP21A2 antibody-CYP21A2 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CYP21A2 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CYP21A2. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%). |




**Typical Testing Data/Standard Curve (for reference only) of CYP21A2 elisa kit**

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CYP21A2. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 323510663 |
| **NCBI GeneID** | 1589 |
| **NCBI Accession #** | NP_000491.4 |
| **UniProt Primary Accession #** | P08686 |
| **UniProt Related Accession #** | P08686 |
| **GenBank Nucleotide #** | NP_000491.4 |
| **NCBI Official Full Name** | steroid 21-hydroxylase isoform a |
| **NCBI Official Synonym Full Names** | cytochrome P450 family 21 subfamily A member 2 |
| **NCBI Official Symbol** | CYP21A2 |
| **NCBI Official Synonym Symbols** | CAH1; CPS1; CA21H; CYP21; CYP21B; P450c21B |
| **UniProt Protein Name** | Steroid 21-hydroxylase |
| **UniProt Synonym Protein Names** | 21-OHase; Cytochrome P-450c21; Cytochrome P450 21; Cytochrome P450 XXI; Cytochrome P450-C21; Cytochrome P450-C21B |
| **Protein Family** | Steroid 21-hydroxylase |
| **UniProt Gene Name** | CYP21A2 |
| **UniProt Synonym Gene Names** | CYP21; CYP21B |
| **UniProt Entry Name** | CP21A_HUMAN |
| **NCBI Protein Information** | steroid 21-hydroxylase |
| **NCBI Summary for CYP21A2** | 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 hydroxylates steroids at the 21 position. Its activity is required for the synthesis of steroid hormones including cortisol and aldosterone. Mutations in this gene cause congenital adrenal hyperplasia. A related pseudogene is located near this gene; gene conversion events involving the functional gene and the pseudogene are thought to account for many cases of steroid 21-hydroxylase deficiency. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008] |

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| **UniProt Comments for CYP21A2** | CYP21A2: Specifically catalyzes the 21-hydroxylation of steroids. Required for the adrenal synthesis of mineralocorticoids and glucocorticoids. Defects in CYP21A2 are the cause of adrenal hyperplasia type 3 (AH3). AH3 is a form of congenital adrenal hyperplasia, a common recessive disease due to defective synthesis of cortisol. Congenital adrenal hyperplasia is characterized by androgen excess leading to ambiguous genitalia in affected females, rapid somatic growth during childhood in both sexes with premature closure of the epiphyses and short adult stature. Four clinical types: 'salt wasting' (SW, the most severe type), 'simple virilizing' (SV, less severely affected patients), with normal aldosterone biosynthesis, 'non-classic form' or late onset (NC or LOAH), and 'cryptic' (asymptomatic). Belongs to the cytochrome P450 family.<br><br>Protein type: EC 1.14.99.10; Oxidoreductase; Lipid Metabolism - C21-steroid hormone<br><br>Chromosomal Location of Human Ortholog: 6p21.3<br><br>Cellular Component: endoplasmic reticulum membrane<br><br>Molecular Function: steroid 21-monooxygenase activity; iron ion binding; heme binding; steroid hydroxylase activity; steroid binding<br><br>Biological Process: steroid metabolic process; xenobiotic metabolic process; mineralocorticoid biosynthetic process; glucocorticoid biosynthetic process; sterol metabolic process<br><br>Disease: Adrenal Hyperplasia, Congenital, Due To 21-hydroxylase Deficiency |
| **Research Articles on CYP21A2** | **1.** majority of 21-hydroxylase deficiency patients carried CYP21A2 gene variants in homozygous or compound heterozygous forms, among which the p.Ile173Asn was the most common one |
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