Human CYP3A4/Cytochrome P450 3A4 ELISA Kit

E45K00547

Catalog Number:E45K00547

Species Reactivity: Human

Storage: Store at +4°C. Please refer to protocols.

Cite ID#:EN5520998

Type: Human ELISA Kits

Description: Human CYP3A4/Cytochrome P450 3A4 ELISA Kit is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit designed for the quantitative measurement of CYP3A4 in biological samples. Our rigorously validated, ready-to-go Human CYP3A4/Cytochrome P450 3A4 ELISA Kit use a simple protocol that easily integrates into your current processes, allowing you to rapidly and accurately detect CYP3A4 in your samples. Appropriate sample types may include Cell Culture Supernates, Serum, Platelet-poor EDTA Plasma, Platelet-poor Heparin Plasma, Urine. Precision Intra-Assay Precision (Precision within an assay): Three samples of known concentration were tested several times on one plate to assess intra-assay precision. Inter-Assay Precision (Precision between assays): Three samples of known concentration were tested in several separate assays to assess inter-assay precision. Assays were performed by at least two technicians using two lots of components.

Assay type: Sandwich

Detection principle: Spectrophotometrical

Sample type: This immunoassay kit allows for the in vitro quantitative determination in Serum, plasma, tissue homogenates, cell culture supernates and other biological fluids.

Sensitivity:34 pg/mL

Assay range:78-5000 pg/mL

Kit components: Assay Plate, Standard, Sample Diluent, Assay Diluent A&B, Detection Reagent A&B, Wash Buffer, Substrate, Stop Solution.

Other reagents required: Deionized or distilled water

Gene Name:CYP3A4

Swiss-Prot No.:P08684

Function:A cytochrome P450 monooxygenase involved in the metabolism of sterols, steroid hormones, retinoids and fatty

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acids (PubMed:10681376, PubMed:11093772, PubMed:11555828, PubMed:14559847, PubMed:12865317, PubMed:15373842, PubMed:15764715, PubMed:20702771, PubMed:19965576, PubMed:21490593, PubMed:21576599). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via cytochrome P450 reductase (NADPH--hemoprotein reductase). Catalyzes the hydroxylation of carbon-hydrogen bonds (PubMed:2732228, PubMed:14559847, PubMed:12865317, PubMed:15373842, PubMed:15764715, PubMed:21576599, PubMed:21490593). Exhibits high catalytic activity for the formation of hydroxyestrogens from estrone (E1) and 17beta-estradiol (E2), namely 2-hydroxy E1 and E2, as well as D-ring hydroxylated E1 and E2 at the C-16 position (PubMed:11555828, PubMed:14559847, PubMed:12865317). Plays a role in the metabolism of androgens, particularly in oxidative deactivation of testosterone (PubMed:2732228, PubMed:15373842, PubMed:15764715, PubMed:22773874). Metabolizes testosterone to less biologically active 2beta- and 6beta-hydroxytestosterones (PubMed:2732228, PubMed:15373842, PubMed:15764715). Contributes to the formation of hydroxycholesterols (oxysterols), particularly A-ring hydroxylated cholesterol at the C-4beta position, and side chain hydroxylated cholesterol at the C-25 position, likely contributing to cholesterol degradation and bile acid biosynthesis (PubMed:21576599). Catalyzes bisallylic hydroxylation of polyunsaturated fatty acids (PUFA) (PubMed:9435160). Catalyzes the epoxidation of double bonds of PUFA with a preference for the last double bond (PubMed:19965576). Metabolizes endocannabinoid arachidonoylethanolamide (anandamide) to 8,9-, 11,12-, and 14,15-epoxyeicosatrienoic acid ethanolamides (EpETrE-EAs), potentially modulating endocannabinoid system signaling (PubMed:20702771). Plays a role in the metabolism of retinoids. Displays high catalytic activity for oxidation of all-trans-retinol to all-trans-retinal, a rate-limiting step for the

Form:ELISA Kits

Synonyms:1,8-cineole 2-exo-monooxygenase,Albendazole sulfoxidase,CYPIIIA3,CYPIIIA4,Cholesterol 25-hydroxylase,Cytochrome P450 3A3,Cytochrome P450 HLp,Cytochrome P450 NF-25,Cytochrome P450-PCN1,Nifedipine oxidase,Quinine 3-monooxygenase,CYP3A3,Albendazole monooxygenase (sulfoxide-forming)