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cytochrome P450 1A1 Antibody (internal region)

Peptide-affinity purified goat antibody
Catalog # AF3649a

Specification

cytochrome P450 1A1 Antibody (internal region) - Product Information

Application	**WB**
Primary Accession	P04798
Other Accession	NP_000490.1, 1543
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**58165**

cytochrome P450 1A1 Antibody (internal region) - Additional Information

Gene ID 1543

Other Names
Cytochrome P450 1A1, 1.14.14.1, CYPIA1, Cytochrome P450 form 6, Cytochrome P450-C, Cytochrome P450-P1, CYP1A1

Format
0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
cytochrome P450 1A1 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

cytochrome P450 1A1 Antibody (internal region) - Protein Information

Name CYP1A1 {ECO:0000303|PubMed:10681376, ECO:0000312|HGNC:HGNC:2595}

Function
A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids, steroid hormones and vitamins (PubMed:11555828, PubMed:14559847, PubMed:12865317, PubMed:15805301, PubMed:15041462, PubMed:<a

href="http://www.uniprot.org/citations/18577768" target="_blank">18577768, PubMed:19965576, PubMed:20972997, PubMed:10681376). 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) (PubMed:11555828, PubMed:14559847, PubMed:12865317, PubMed:15805301, PubMed:15041462, PubMed:18577768, PubMed:19965576, PubMed:20972997, PubMed:10681376). Catalyzes the hydroxylation of carbon-hydrogen bonds. 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 C15-alpha and C16- alpha positions (PubMed:11555828, PubMed:14559847, PubMed:12865317, PubMed:15805301). Displays different regioselectivities for polyunsaturated fatty acids (PUFA) hydroxylation (PubMed:15041462, PubMed:18577768). Catalyzes the epoxidation of double bonds of certain PUFA (PubMed:15041462, PubMed:19965576, PubMed:20972997). Converts arachidonic acid toward epoxyeicosatrienoic acid (EET) regioisomers, 8,9-, 11,12-, and 14,15-EET, that function as lipid mediators in the vascular system (PubMed:20972997). Displays an absolute stereoselectivity in the epoxidation of eicosapentaenoic acid (EPA) producing the 17(R),18(S) enantiomer (PubMed:15041462). May play an important role in all-trans retinoic acid biosynthesis in extrahepatic tissues. Catalyzes two successive oxidative transformation of all-trans retinol to all-trans retinal and then to the active form all-trans retinoic acid (PubMed:10681376). May also participate in eicosanoids metabolism by converting hydroperoxide species into oxo metabolites (lipoxygenase-like reaction, NADPH-independent) (PubMed:21068195).

Cellular Location
Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P00185}; Peripheral membrane protein {ECO:0000250|UniProtKB:P00185}. Mitochondrion inner membrane {ECO:0000250|UniProtKB:P00185}; Peripheral membrane protein {ECO:0000250|UniProtKB:P00185}. Microsome membrane {ECO:0000250|UniProtKB:P00185}; Peripheral membrane protein {ECO:0000250|UniProtKB:P00185}. Cytoplasm {ECO:0000250|UniProtKB:P00185}

Tissue Location
Lung, lymphocytes and placenta.

cytochrome P450 1A1 Antibody (internal region) - Protocols

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Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

cytochrome P450 1A1 Antibody (internal region) - Images



AF3649a (0.3 µg/ml) staining of A549 (A) and MCF7 (B) lysates (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

cytochrome P450 1A1 Antibody (internal region) - Background

This antibody is not expected to cross-react with the similar P450 1A2

cytochrome P450 1A1 Antibody (internal region) - References

Sequence variants at CYP1A1-CYP1A2 and AHR associate with coffee consumption. Sulem P, Gudbjartsson DF, Geller F, Prokopenko I, Feenstra B, Aben KK, Franke B, den Heijer M, Kovacs P, Stumvoll M, Mägi R, Yanek LR, Becker LC, Boyd HA, Stacey SN, Walters GB, Jonasdottir A, Thorleifsson G, Holm H, Gudjonsson SA, Rafnar T, Björnsdottir Hum Mol Genet. 2011 May 15;20(10):2071-7. PMID: 21357676