

CYP1A1 Antibody (clone 6G5)
Mouse Monoclonal Antibody
Catalog # ALS15717**Specification**

CYP1A1 Antibody (clone 6G5) - Product Information

Application	IHC
Primary Accession	P04798
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	58kDa KDa

CYP1A1 Antibody (clone 6G5) - Additional Information**Gene ID** 1543**Other Names**

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

Target/Specificity

Human CYP1A1

Reconstitution & Storage

Long term: -20°C; Short term: +4°C; Avoid freeze-thaw cycles.

Precautions

CYP1A1 Antibody (clone 6G5) is for research use only and not for use in diagnostic or therapeutic procedures.

CYP1A1 Antibody (clone 6G5) - 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: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 hydroxysteroids 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.

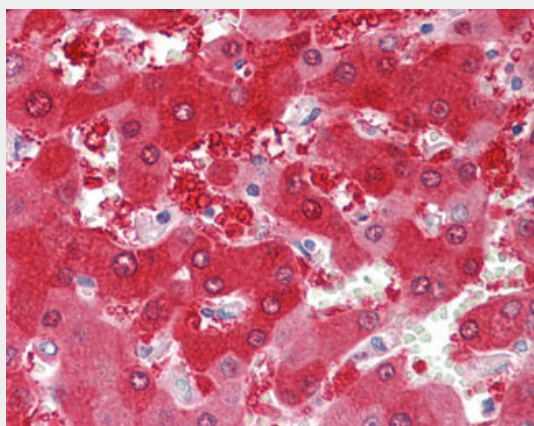
CYP1A1 Antibody (clone 6G5) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)

- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CYP1A1 Antibody (clone 6G5) - Images



Anti-CYP1A1 antibody IHC staining of human liver.

CYP1A1 Antibody (clone 6G5) - Background

Cytochromes P450 are a group of heme-thiolate monooxygenases. In liver microsomes, this enzyme is involved in an NADPH-dependent electron transport pathway. It oxidizes a variety of structurally unrelated compounds, including steroids, fatty acids, and xenobiotics.

CYP1A1 Antibody (clone 6G5) - References

- Jaiswal A.K.,et al.Nucleic Acids Res. 13:4503-4520(1985).
Jaiswal A.K.,et al.Science 228:80-83(1985).
Kawajiri K.,et al.Eur. J. Biochem. 159:219-225(1986).
Corchero J.,et al.Pharmacogenetics 11:1-6(2001).
Graebisch C.,et al.Submitted (FEB-2006) to the EMBL/GenBank/DDBJ databases.