

CYP4F2 Polyclonal Antibody
Catalog # AP69418**Specification**

CYP4F2 Polyclonal Antibody - Product Information

Application	WB, IHC-P
Primary Accession	P78329
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal

CYP4F2 Polyclonal Antibody - Additional Information**Gene ID** 8529**Other Names**

CYP4F2; Leukotriene-B(4) omega-hydroxylase 1; CYP4F2; Cytochrome P450 4F2; Cytochrome P450-LTB-omega; Leukotriene-B(4) 20-monooxygenase 1

Dilution

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications.

IHC-P~~N/A

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions

-20°C

CYP4F2 Polyclonal Antibody - Protein Information**Name** CYP4F2 {ECO:0000303|PubMed:10492403, ECO:0000312|HGNC:HGNC:2645}**Function**

A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids, eicosanoids and vitamins (PubMed:10660572, PubMed:10833273, PubMed:11997390, PubMed:17341693, PubMed:18574070, PubMed:18577768).

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 (CPR; NADPH-ferrihemoprotein reductase). Catalyzes predominantly the oxidation of the terminal carbon (omega-oxidation) of long- and very long-chain fatty acids. Displays high omega-hydroxylase activity toward polyunsaturated fatty acids (PUFAs) (PubMed:18577768). Participates in the conversion of arachidonic acid to omega-hydroxyeicosatetraenoic acid (20-HETE), a signaling molecule acting both as vasoconstrictive and natriuretic with overall effect on arterial blood pressure (PubMed:10660572, PubMed:17341693, PubMed:18574070). Plays a role in the oxidative inactivation of eicosanoids, including both pro-inflammatory and anti-inflammatory mediators such as leukotriene B4 (LTB4), lipoxin A4 (LXA4), and several HETEs (PubMed:10660572, PubMed:10833273, PubMed:17341693, PubMed:18574070, PubMed:18577768, PubMed:8026587, PubMed:9799565). Catalyzes omega-hydroxylation of 3-hydroxy fatty acids (PubMed:18065749). Converts monoepoxides of linoleic acid leukotoxin and isoleukotoxin to omega-hydroxylated metabolites (PubMed:15145985). Contributes to the degradation of very long-chain fatty acids (VLCFAs) by catalyzing successive omega-oxidations and chain shortening (PubMed:16547005, PubMed:18182499). Plays an important role in vitamin metabolism by chain shortening. Catalyzes omega-hydroxylation of the phytol chain of tocopherols (forms of vitamin E), with preference for gamma-tocopherols over alpha-tocopherols, thus promoting retention of alpha-tocopherols in tissues (PubMed:11997390). Omega-hydroxylates and inactivates phyloquinone (vitamin K1), and menaquinone-4 (MK-4, a form of vitamin K2), both acting as cofactors in blood coagulation (PubMed:19297519, PubMed:24138531).

Cellular Location

Microsome membrane; Peripheral membrane protein. Endoplasmic reticulum membrane; Peripheral membrane protein

Tissue Location

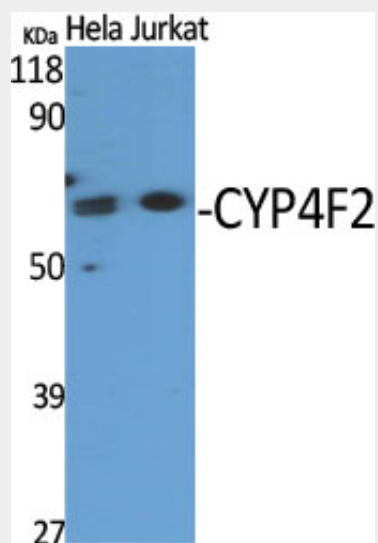
Liver. Also present in kidney: specifically expressed in the S2 and S3 segments of proximal tubules in cortex and outer medulla (PubMed:10660572).

CYP4F2 Polyclonal Antibody - Protocols

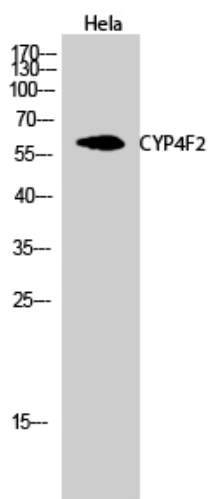
Provided below are standard protocols that you may find useful for product applications.

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

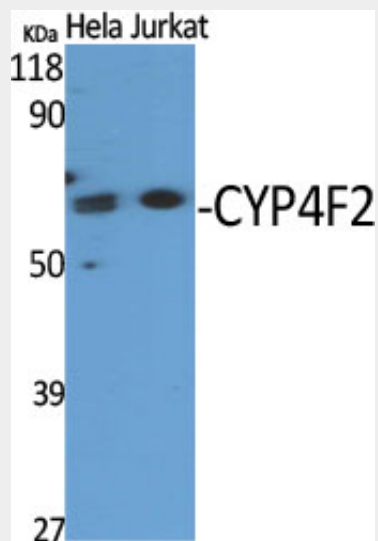
CYP4F2 Polyclonal Antibody - Images



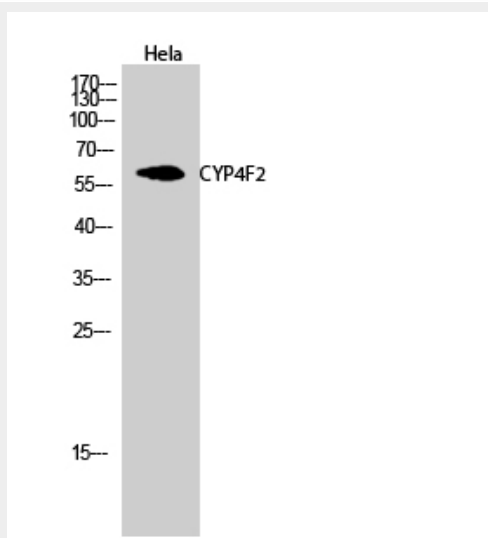
Western Blot analysis of various cells using CYP4F2 Polyclonal Antibody



Western Blot analysis of HeLa cells using CYP4F2 Polyclonal Antibody



Western Blot analysis of various cells using CYP4F2 Polyclonal Antibody



Western Blot analysis of HeLa cells using CYP4F2 Polyclonal Antibody

CYP4F2 Polyclonal Antibody - Background

Omega-hydroxylase that oxidizes a variety of structurally unrelated compounds, including steroids, fatty acids and xenobiotics. Plays a key role in vitamin K catabolism by mediating omega-hydroxylation of vitamin K1 (phylloquinone), and menaquinone-4 (MK-4), a form of vitamin K2. Hydroxylation of phylloquinone and MK-4 probably regulates blood coagulation (PubMed:19297519, PubMed:24138531). Also shows arachidonic acid omega-hydroxylase activity in kidney, by mediating conversion of arachidonic acid to 20-hydroxyeicosatetraenoic acid (20-HETE), possibly influencing blood pressure control (PubMed:10660572, PubMed:17341693, PubMed:18574070). Also acts as a leukotriene-B(4) omega-hydroxylase by mediating conversion of leukotriene-B(4) (LTB4) to its omega-hydroxylated metabolite 20-hydroxyleukotriene- B(4) (20-OH LTB4) (PubMed:8026587, PubMed:9799565).

CYP4F2 Polyclonal Antibody - Citations

- [Insights into the metabolic characteristics of aminopropanediol analogues of SYLs as S1P modulators: from structure to metabolism](#)