

For Research Use Only

# CYP1A2-Specific Polyclonal antibody

Catalog Number: 19936-1-AP

42 Publications



## Basic Information

### Catalog Number:

19936-1-AP

### Size:

150ul, Concentration: 500 ug/ml by Nanodrop;

### Source:

Rabbit

### Isotype:

IgG

### GenBank Accession Number:

NM\_000761

### GeneID (NCBI):

1544

### UNIPROT ID:

P05177

### Full Name:

cytochrome P450, family 1, subfamily A, polypeptide 2

### Calculated MW:

58 kDa

### Observed MW:

58 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

WB 1:500-1:2000

IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC 1:100-1:400

IF/ICC 1:200-1:800

## Applications

### Tested Applications:

WB, IHC, IF/ICC, FC (Intra), IP, ELISA

### Cited Applications:

WB, IHC, IF

### Species Specificity:

human, mouse, rat

### Cited Species:

human, mouse, rat

### Positive Controls:

WB: mouse liver tissue,

IP: mouse liver tissue,

IHC: human liver tissue, mouse liver tissue

IF/ICC: HeLa cells,

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

## Background Information

CYP1A2, also named as CP12; P3-450 and P450(PA), belongs to the cytochrome P450 family. Cytochromes P450 are a group of heme-thiolate monooxygenases. In liver microsomes, CYP1A2 is involved in an NADPH-dependent electron transport pathway. It oxidizes a variety of structurally unrelated compounds, including steroids, fatty acids, and xenobiotics. Most active of CYP1A2 is in catalyzing 2-hydroxylation. Caffeine is metabolized primarily by cytochrome CYP1A2 in the liver through an initial N3-demethylation. It also acts in the metabolism of aflatoxin B1 and acetaminophen. CYP1A2 participates in the bioactivation of carcinogenic aromatic and heterocyclic amines. It catalyzes the reaction:  $RH + \text{reduced flavoprotein} + O_2 = ROH + \text{oxidized flavoprotein} + H_2O$ . The antibody is specific to CYP1A2.

## Notable Publications

Author	Pubmed ID	Journal	Application
Fenja A Schuran	32932016	Cell Mol Gastroenterol Hepatol	IF, WB
Linjie Lv	25203445	Hepatology	IF
Shotaro Uehara	36050438	Sci Rep	WB

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

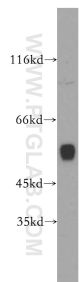
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T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

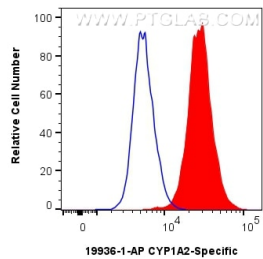
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
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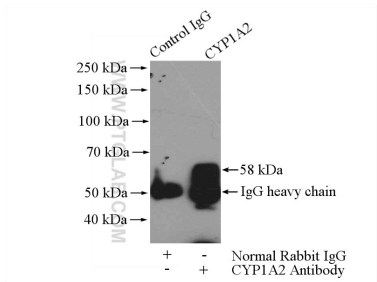
Selected Validation Data



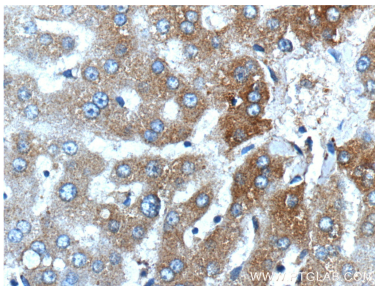
mouse liver tissue were subjected to SDS PAGE followed by western blot with 19936-1-AP (CYP1A2-Specific antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



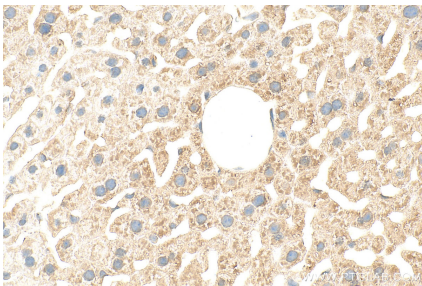
1x10<sup>6</sup> HepG2 cells were intracellularly stained with 0.25 ug CYP1A2-Specific Polyclonal antibody (19936-1-AP) and Coralite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2)(red), or 0.25 ug Rabbit IgG control Rabbit PolyAb (30000-O-AP) (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



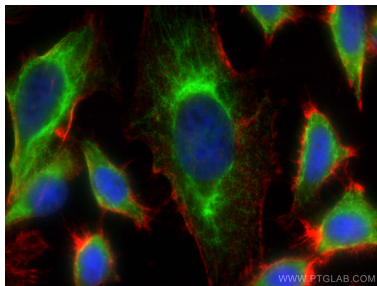
IP result of anti-CYP1A2-Specific (IP:19936-1-AP, 4ug; Detection:19936-1-AP 1:300) with mouse liver tissue lysate 4000ug.



Immunohistochemical analysis of paraffin-embedded human liver tissue slide using 19936-1-AP (CYP1A2-Specific Antibody) at dilution of 1:200 (under 40x lens).



Immunohistochemical analysis of paraffin-embedded mouse liver tissue slide using 19936-1-AP (CYP1A2-Specific antibody) at dilution of 1:400 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (-20°C Ethanol) fixed HeLa cells using CYP1A2-Specific antibody (19936-1-AP) at dilution of 1:400 and Coralite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-phalloidin (red).