

# CYP1A1 Antibody

Catalog No: tcna6565



## Available Sizes

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**Size:** 100ug



## Specifications

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**Application:**

WB, IHC-P, IHC-F, FACS

**Species Reactivity:**

Human, Mouse, Rat

**Host Species:**

Rabbit

**Immunogen / Amino acids:**

Amino acids 183-320 of human CYP1A1 were used as the immunogen for the CYP1A1 antibody.

**Conjugation:**

Antigen affinity purified

**Clonality:**

Polyclonal

**Isotype:**

Rabbit IgG

**Form:**

Lyophilized powder

**Storage Buffer:**

0.5mg/ml if reconstituted with 0.2ml sterile DI water

**Recommended Dilution:**

Western blot: 0.1-0.5ug/ml

IHC (Frozen): 0.5-1ug/ml

IHC (Paraffin): 0.5-1ug/ml

FACS: 1-3ug/10<sup>6</sup> cells Optimal dilution of the CYP1A1 antibody should be determined by the researcher.

#### Storage Instruction:

After reconstitution, the CYP1A1 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.

#### SwissProt:

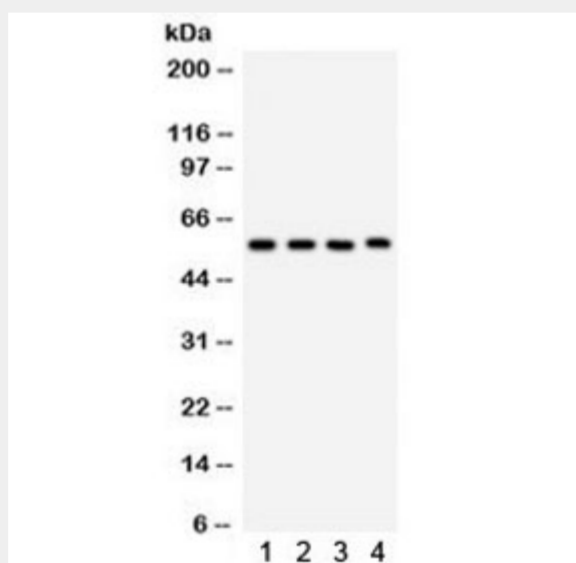
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#### References

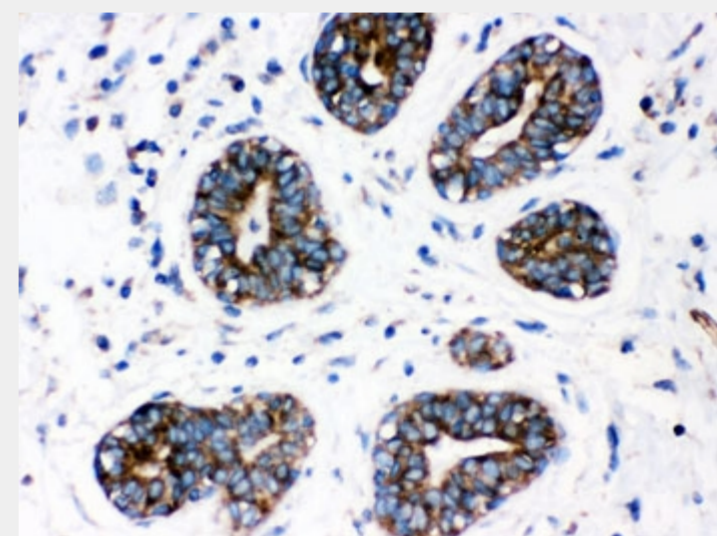
Antigen affinity purified

#### Product Description

CYP1A1 is involved in phase I xenobiotic and drug metabolism (one substrate of it is theophylline). It is inhibited by fluoroquinolones and macrolides and induced by aromatic hydrocarbons. CYP1A1 is also known as AHH (aryl hydrocarbon hydroxylase). It is involved in the metabolic activation of aromatic hydrocarbons (polycyclic aromatic hydrocarbons, PAH), for example, benzo(a)pyrene (BP), by transforming it to an epoxide. In this reaction, the oxidation of benzo[a]pyrene is catalysed by CYP1A1 to form BP-7,8-epoxide, which can be further oxidized by epoxide hydrolase (EH) to form BP-7,8-dihydrodiol. Finally CYP1A1 catalyses this intermediate to form BP-7,8-dihydrodiol-9,10-epoxide, which is the ultimate carcinogen. However, an in vivo experiment with gene-deficient mice has found that the hydroxylation of benzo(a)pyrene by CYP1A1 can have an overall protective effect on the DNA, rather than contributing to potentially carcinogenic DNA modifications. This effect is likely due to the fact that CYP1A1 is highly active in the intestinal mucosa, and thus inhibits infiltration of ingested benzo(a)pyrene carcinogen into the systemic circulation.

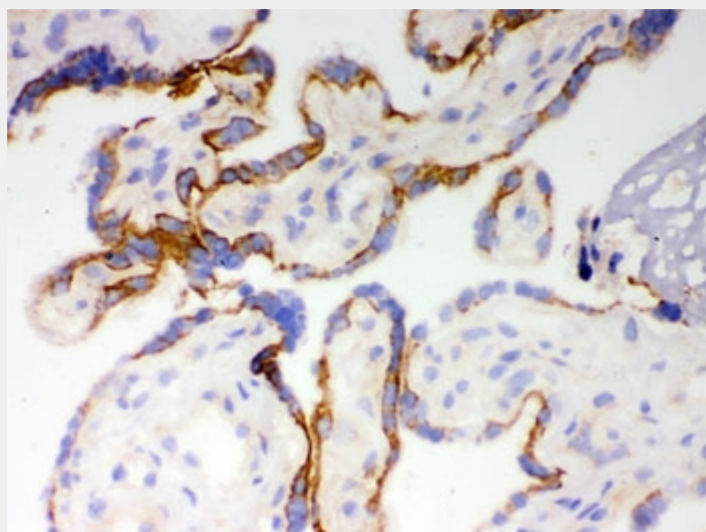


Western blot testing of 1) rat lung, 2) mouse lung, 3) human placenta, 4) Jurkat lysate with CYP1A1 antibody. Predicted/observed molecular weight ~58 kDa.

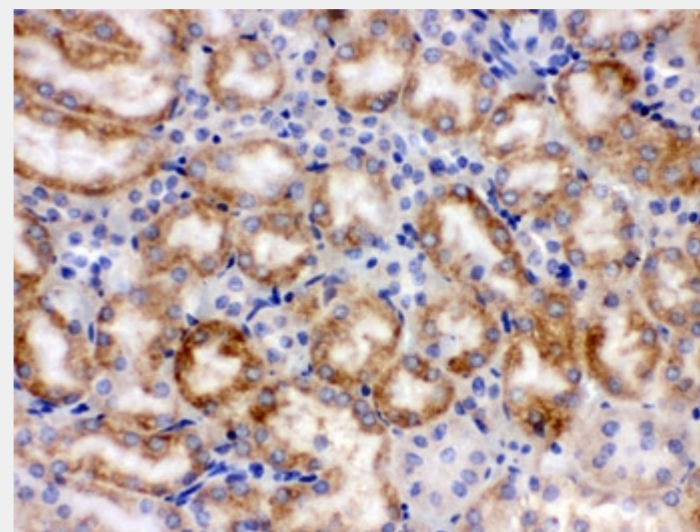


IHC testing of FFPE human breast cancer with CYP1A1 antibody. HIER: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to staining.

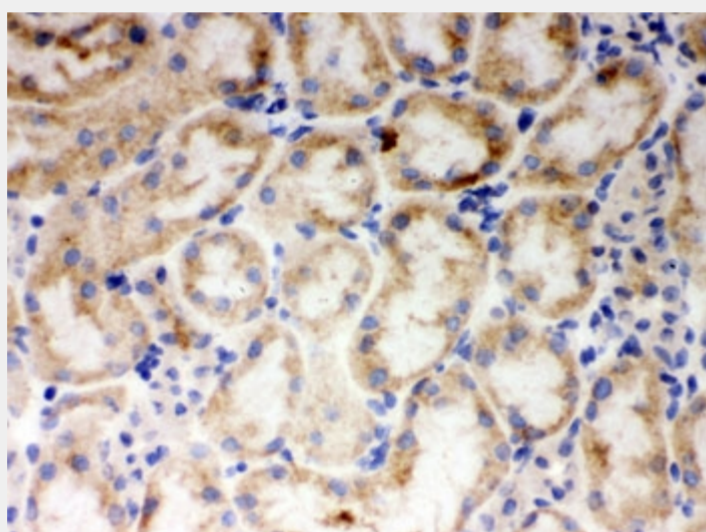




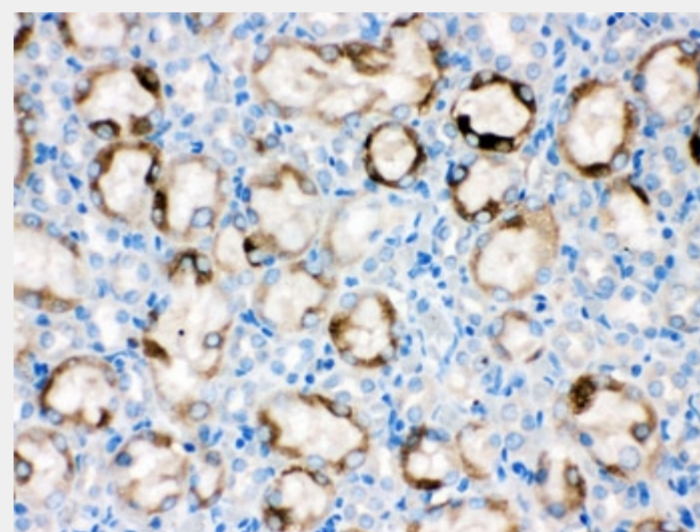
IHC testing of frozen human placenta tissue with CYP1A1 antibody.



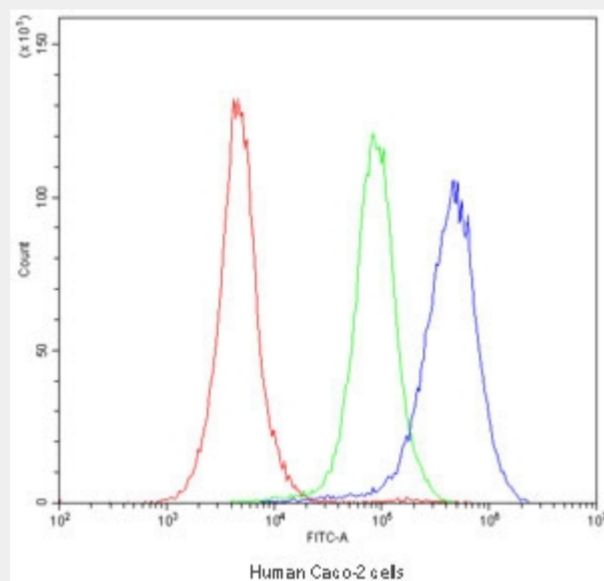
IHC testing of FFPE mouse kidney with CYP1A1 antibody. HIER: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to staining.



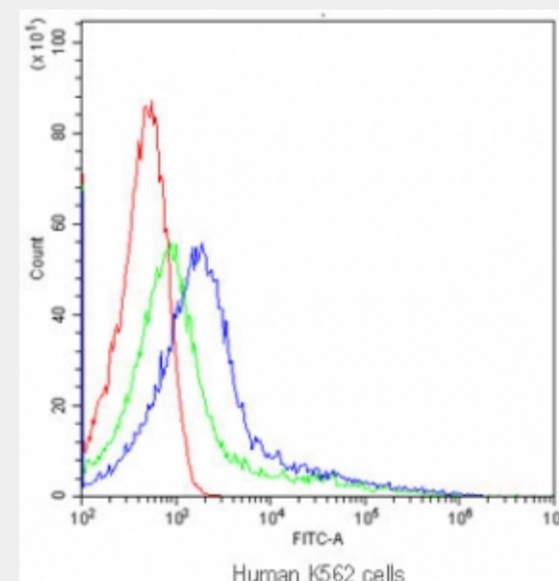
IHC testing of frozen mouse kidney tissue with CYP1A1 antibody.



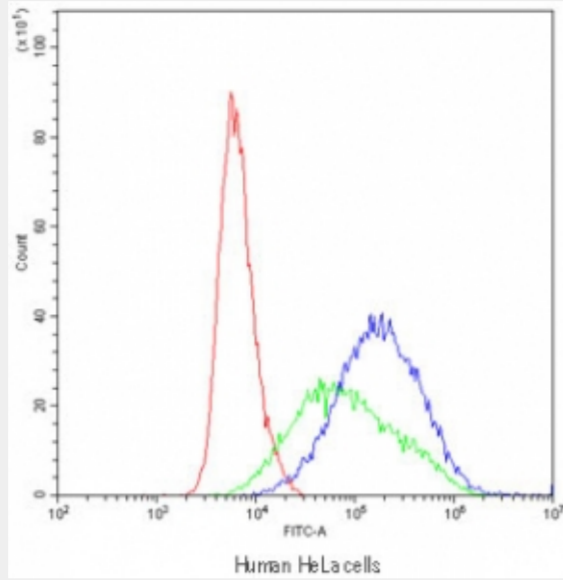
IHC testing of FFPE rat kidney with CYP1A1 antibody. HIER: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to staining.



Flow cytometry testing of human Caco-2 cells with CYP1A1 antibody at 1ug/10<sup>6</sup> cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue=CYP1A1 antibody.



Flow cytometry testing of human K562 cells with CYP1A1 antibody at 1ug/10<sup>6</sup> cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue=CYP1A1 antibody.



Flow cytometry testing of human HeLa cells with CYP1A1 antibody at  $1\mu\text{g}/10^6$  cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue=CYP1A1 antibody.

All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!