

## Product datasheet

# Anti-Cytochrome P450 3A4/CYP3A4 antibody [EPR6202] ab124921

Recombinant RabMAb

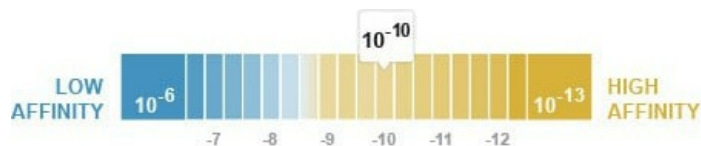
★★★★★ [1 Abreviews](#) [12 References](#) [8 Images](#)

### Overview

<b>Product name</b>	Anti-Cytochrome P450 3A4/CYP3A4 antibody [EPR6202]
<b>Description</b>	Rabbit monoclonal [EPR6202] to Cytochrome P450 3A4/CYP3A4
<b>Host species</b>	Rabbit
<b>Specificity</b>	Cross-reactivity with other CYP3A family: ab124921 has high possibility of reacting with CYP3A7 based on our internal test.
<b>Tested applications</b>	<b>Suitable for:</b> WB, IP, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide within Human Cytochrome P450 3A4/CYP3A4 aa 450-550 (C terminal). The exact sequence is proprietary. (Peptide available as <a href="#">ab234892</a> )
<b>Positive control</b>	WB: Human fetal and liver cell lysates IHC-P: Human liver tissue IP: Human liver cell lysates
<b>General notes</b>	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"><li>- High batch-to-batch consistency and reproducibility</li><li>- Improved sensitivity and specificity</li><li>- Long-term security of supply</li><li>- Animal-free production</li></ul> For more information <a href="#">see here</a> . Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a> .  Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>Dissociation constant (K<sub>D</sub>)</b>	K <sub>D</sub> = 2.63 x 10 <sup>-10</sup> M



[Learn more about  \$K\_D\$](#)

<b>Storage buffer</b>	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR6202
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab124921 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (1)	1/1000. Predicted molecular weight: 57 kDa. For unpurified use at 1/10000 - 1/50000 dilution.
IP		1/10 - 1/100.
IHC-P		1/400. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. For unpurified use at 1/100 - 1/250 dilution.  See <a href="#">IHC antigen retrieval protocols</a>

## Target

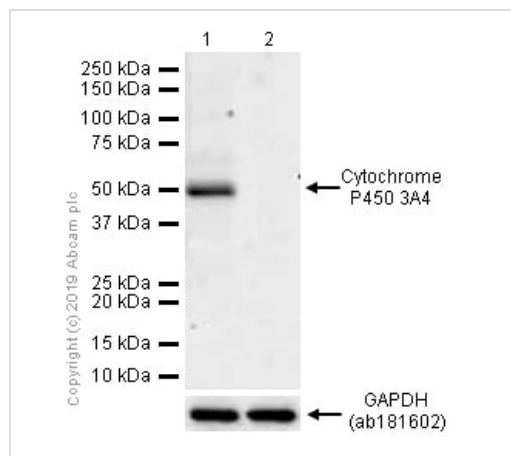
**Function** Cytochromes P450 are a group of heme-thiolate monooxygenases. In liver microsomes, this enzyme is involved in an NADPH-dependent electron transport pathway. It performs a variety of oxidation reactions (e.g. caffeine 8-oxidation, omeprazole sulphoxidation, midazolam 1'-hydroxylation and midazolam 4-hydroxylation) of structurally unrelated compounds, including steroids, fatty acids, and xenobiotics. The enzyme also hydroxylates etoposide.

**Tissue specificity** Expressed in prostate and liver. According to some authors, it is not expressed in brain (PubMed:19094056). According to others, weak levels of expression are measured in some brain locations (PubMed:19359404 and PubMed:18545703). Also expressed in epithelium of the small intestine and large intestine, bile duct, nasal mucosa, kidney, adrenal cortex, epithelium of the gastric mucosa with intestinal metaplasia, gallbladder, intercalated ducts of the pancreas, chief cells of the parathyroid and the corpus luteum of the ovary (at protein level).

**Sequence similarities** Belongs to the cytochrome P450 family.

**Post-translational modifications** Polyubiquitinated in the presence of AMFR and UBE2G1 and also STUB1/CHIP and UBE2D1 (in vitro).

Images



Western blot - Anti-Cytochrome P450 3A4/CYP3A4 antibody [EPR6202] (ab124921)

**All lanes :** Anti-Cytochrome P450 3A4/CYP3A4 antibody

[EPR6202] (ab124921) at 1/1000 dilution (Purified)

**Lane 1 :** Human liver lysates

**Lane 2 :** HepG2 (Human hepatocellular carcinoma epithelial cell), Whole cell lysate

Lysates/proteins at 20 µg per lane.

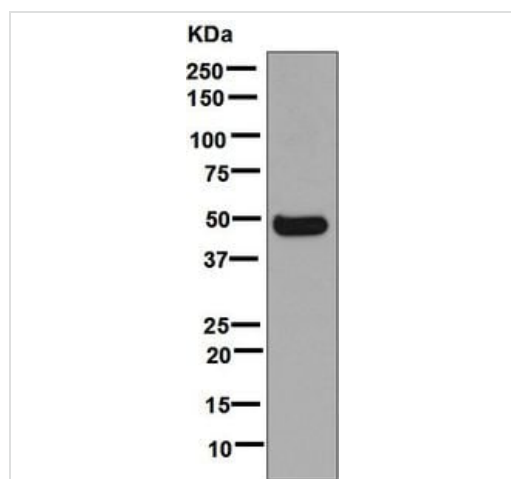
**Secondary**

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

**Predicted band size:** 57 kDa

**Observed band size:** 50 kDa

This antibody fails to detect BOI in normal HepG2 cells which is positive reported by PMID 26089940 and 25141173



Western blot - Anti-Cytochrome P450 3A4/CYP3A4 antibody [EPR6202] (ab124921)

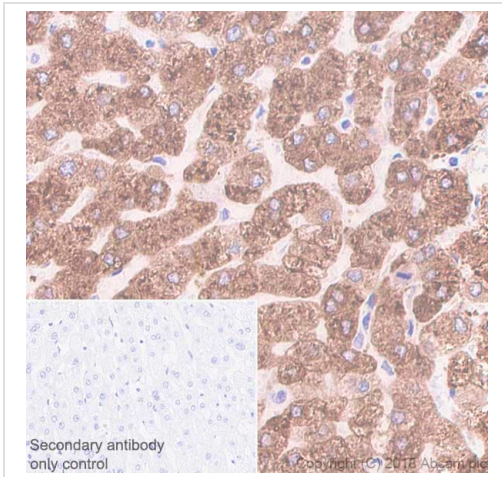
Anti-Cytochrome P450 3A4/CYP3A4 antibody [EPR6202]

(ab124921) at 1/10000 dilution ((unpurified)) + Human fetal liver lysate at 10 µg

**Secondary**

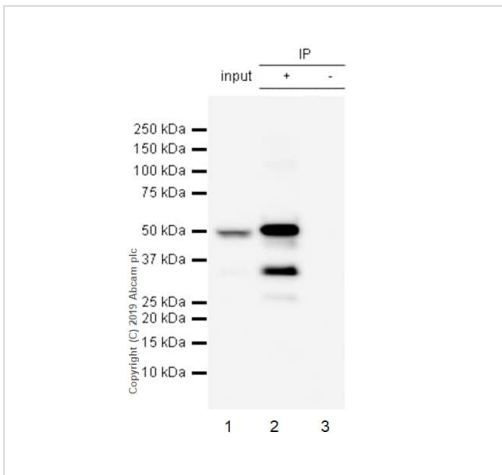
HRP labelled goat anti rabbit at 1/2000 dilution

**Predicted band size:** 57 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytochrome P450 3A4/CYP3A4 antibody [EPR6202] (ab124921)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human liver tissue sections labeling Cytochrome P450 3A4/CYP3A4 with purified ab124921 at 1/400 dilution (0.35 µg/ml). Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunoprecipitation - Anti-Cytochrome P450 3A4/CYP3A4 antibody [EPR6202] (ab124921)

ab124921 (purified) at 1/20 dilution (1µg) immunoprecipitating Cytochrome P450 3A4/CYP3A4 in Human liver lysates.

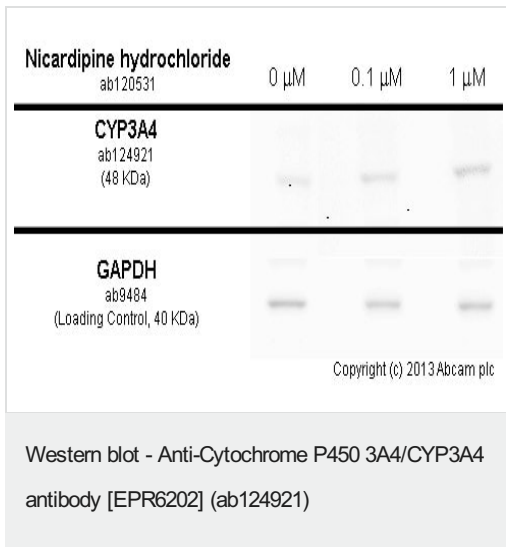
Lane 1: Human liver lysates 10µg

Lane 2 (+): ab124921 & Human liver lysates

Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab124921 in Human liver lysates

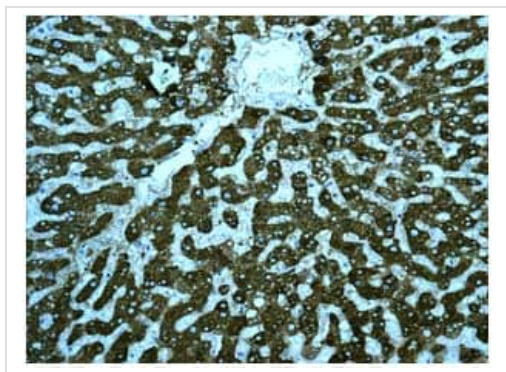
For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was at 1/1000 dilution.

Blocking and diluting buffer: 5% NFDm/TBST.



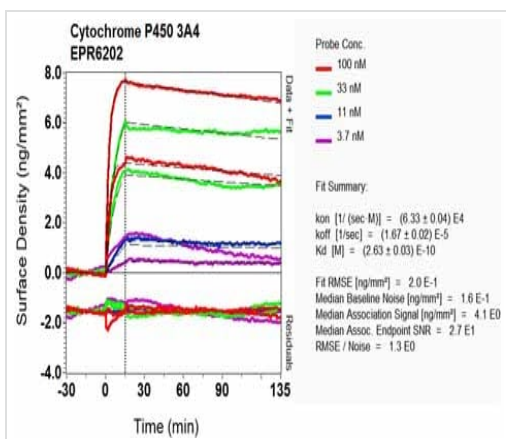
HepG2 cells were incubated at 37°C for 48h with vehicle control (0 μM) and different concentrations of nicardipine hydrochloride (**ab120531**) in DMSO. Increased expression of Cytochrome P450 3A4/CYP3A4 (ab124921, unpurified) correlates with an increase in nicardipine hydrochloride concentration, as described in literature.

Whole cell lysates were prepared with RIPA buffer (containing protease inhibitors and sodium orthovanadate), 10μg of each were loaded on the gel and the WB was run under reducing conditions. After transfer the membrane was blocked for an hour using 5% BSA before being incubated with ab124921 (unpurified) at 1/10000 dilution and **ab9484** at 1 μg /ml overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP (**ab97051**) at 1/10000 dilution and visualised using ECL development solution.



ab124921 (unpurified), at a 1/100 dilution, staining Cytochrome P450 3A4/CYP3A4 in paraffin embedded Human liver tissue by Immunohistochemistry.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytochrome P450 3A4/CYP3A4 antibody [EPR6202] (ab124921)



Equilibrium disassociation constant ( $K_D$ )

Learn more about  $K_D$

[Click here to learn more about  \$K\_D\$](#)

OIR-D Scanning - Anti-Cytochrome P450 3A4/CYP3A4 antibody [EPR6202] (ab124921)

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-Cytochrome P450 3A4/CYP3A4 antibody  
[EPR6202] (ab124921)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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