

Product datasheet

Anti-Angiotensinogen antibody [EPR24118-2] ab276132

Recombinant RabMAb

[1 References](#) [11 Images](#)

Overview

Product name	Anti-Angiotensinogen antibody [EPR24118-2]
Description	Rabbit monoclonal [EPR24118-2] to Angiotensinogen
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), IHC-P, WB, IP, ICC/IF Unsuitable for: IHC-Fr
Species reactivity	Reacts with: Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human plasma, lung, liver and kidney tissue lysates; Rat plasma; Rat lung, kidney and liver tissue tissue lysate; HepG2 and Huh7 whole cell lysates. Flow Cyt (intra): HepG2 cells. ICC/IF: HepG2 cells. IHC-P: Rat kidney tissue; Human placenta, liver, and kidney tissue. IP: HepG2 whole cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59.94% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR24118-2

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab276132 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
Flow Cyt (Intra)		1/500.
IHC-P		1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/1000. Detects a band of approximately 48-70 kDa (predicted molecular weight: 53 kDa).
IP		1/30.
ICC/IF		1/100.

Application notes

Is unsuitable for IHC-Fr.

Target

Function

Essential component of the renin-angiotensin system (RAS), a potent regulator of blood pressure, body fluid and electrolyte homeostasis. In response to lowered blood pressure, the enzyme renin cleaves angiotensinogen to produce angiotensin-1 (angiotensin 1-10). Angiotensin-1 is a substrate of ACE (angiotensin converting enzyme) that removes a dipeptide to yield the physiologically active peptide angiotensin-2 (angiotensin 1-8). Angiotensin-1 and angiotensin-2 can be further processed to generate angiotensin-3 (angiotensin 2-8), angiotensin-4 (angiotensin 3-8). Angiotensin 1-7 is cleaved from angiotensin-2 by ACE2 or from angiotensin-1 by MME (nepriylisin). Angiotensin 1-9 is cleaved from angiotensin-1 by ACE2.

Angiotensin-2 acts directly on vascular smooth muscle as a potent vasoconstrictor, affects cardiac contractility and heart rate through its action on the sympathetic nervous system, and alters renal sodium and water absorption through its ability to stimulate the zona glomerulosa cells of the adrenal cortex to synthesize and secrete aldosterone.

Angiotensin-3 stimulates aldosterone release.

Angiotensin 1-7 is a ligand for the G-protein coupled receptor MAS1 (By similarity). Has vasodilator and antidiuretic effects (By similarity). Has an antithrombotic effect that involves MAS1-mediated release of nitric oxide from platelets.

Tissue specificity

Expressed by the liver and secreted in plasma.

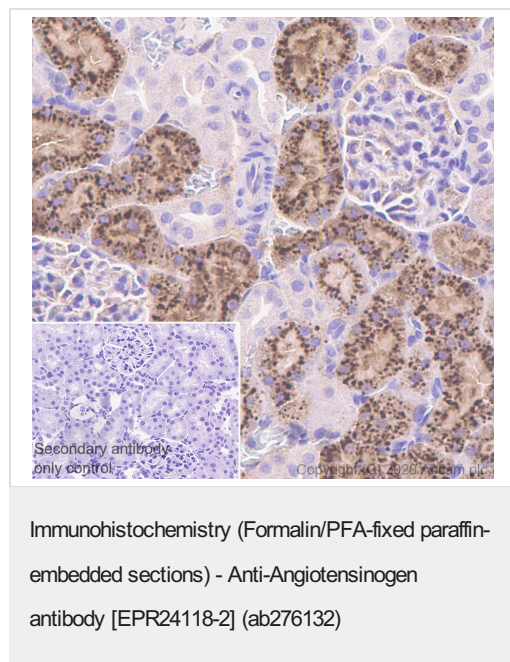
Involvement in disease

Genetic variations in AGT are a cause of susceptibility to essential hypertension (EHT) [MIM:145500]. Essential hypertension is a condition in which blood pressure is consistently higher than normal with no identifiable cause.

Defects in AGT are a cause of renal tubular dysgenesis (RTD) [MIM:267430]. RTD is an autosomal recessive severe disorder of renal tubular development characterized by persistent fetal anuria and perinatal death, probably due to pulmonary hypoplasia from early-onset oligohydramnios (the Potter phenotype).

Sequence similarities	Belongs to the serpin family.
Post-translational modifications	Beta-decarboxylation of Asp-34 in angiotensin-2, by mononuclear leukocytes produces alanine. The resulting peptide form, angiotensin-A, has the same affinity for the AT1 receptor as angiotensin-2, but a higher affinity for the AT2 receptor.
Cellular localization	Secreted.

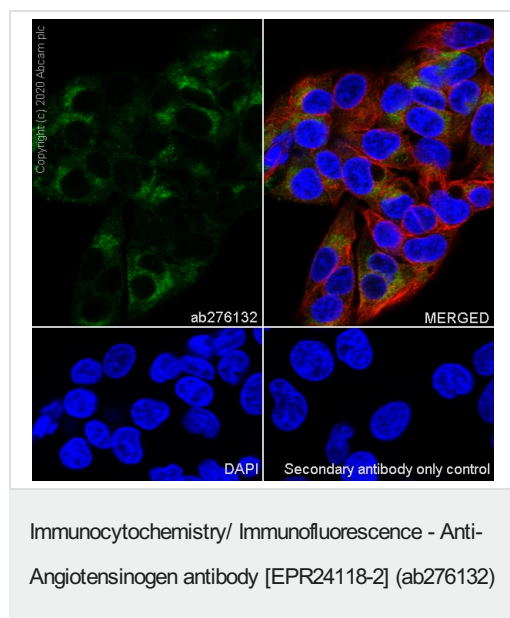
Images



Immunohistochemical analysis of paraffin-embedded Rat kidney tissue labeling Angiotensinogen with ab276132 at 1/500 (0.854 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)). Cytoplasmic staining on rat kidney (PMID: 28716988). The section was incubated with ab276132 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND[®] RX instrument. Counterstained with Hematoxylin.

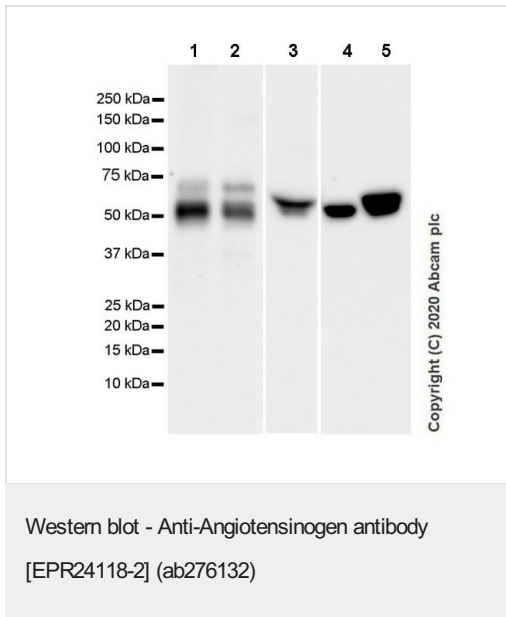
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 minutes.



Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 100% Methanol permeabilized HepG2 cells labelling Angiotensinogen with ab276132 at 1/100 (4.27 ug/ml) dilution, followed by [ab150077](#) Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in HepG2 cell line. [ab195889](#) Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor[®] 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is [ab150077](#) Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) at 1/1000 dilution.



All lanes : Anti-Angiotensinogen antibody [EPR24118-2] (ab276132) at 1/1000 dilution

Lane 1 : HepG2 (human hepatocellular carcinoma epithelial cell), whole cell lysate

Lane 2 : Huh7 (human hepatocellular carcinoma epithelial cell), whole cell lysate

Lane 3 : Human lung tissue lysate

Lane 4 : Human liver tissue lysate

Lane 5 : Human kidney tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 53 kDa

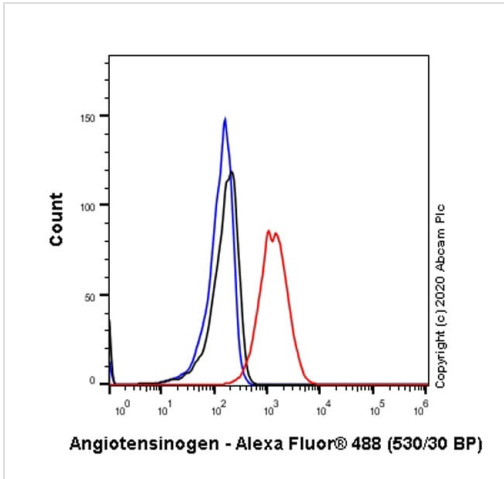
Observed band size: 48-70 kDa

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Angiotensinogen undergoes glycosylation. The molecular weight observed is consistent with what has been described in literature(PMID: 9694881).

Lanes 1 & 2 of the blot were developed using a higher sensitivity ECL substrate.

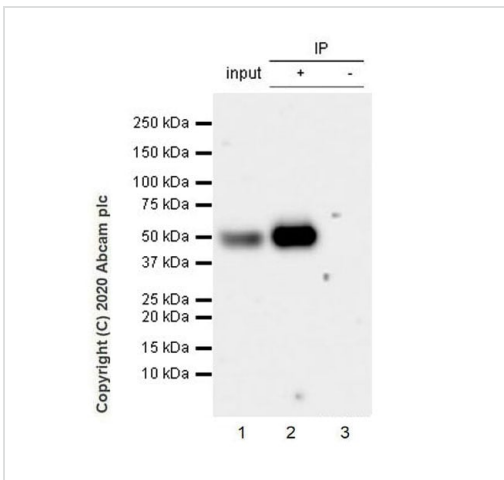
Exposure times: Lane 1, 2: 59 seconds; Lane 3: 3.25 seconds; Lane 4, 5: 15 seconds



Flow Cytometry (Intracellular) - Anti-Angiotensinogen antibody [EPR24118-2] (ab276132)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HepG2 (human hepatocellular carcinoma epithelial cell) cells labelling Angiotensinogen with ab276132 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (**ab172730**) isotype control (Black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-Angiotensinogen antibody [EPR24118-2] (ab276132)

Angiotensinogen was immunoprecipitated from 0.35 mg HepG2 (human hepatocellular carcinoma epithelial cell), whole cell lysate with ab276132 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab276132 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used at 1/5000 dilution.

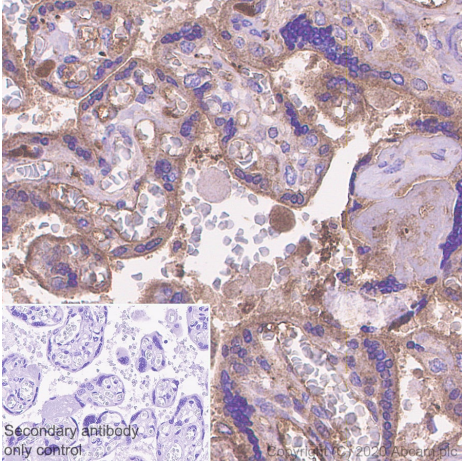
Lane 1: HepG2 (human hepatocellular carcinoma epithelial cell), whole cell lysate 10 ug

Lane 2: ab276132 IP in HepG2 whole cell lysate

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab276132 in HepG2 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDN/TBST.

Exposure time: 23 seconds.

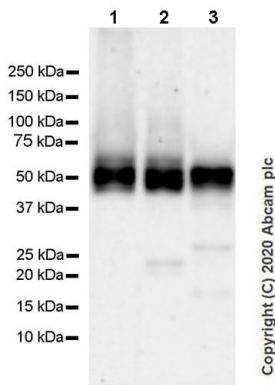


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Angiotensinogen antibody [EPR24118-2] (ab276132)

Immunohistochemical analysis of paraffin-embedded Human placenta tissue labeling Angiotensinogen with ab276132 at 1/500 (0.854 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Cytoplasmic staining on human placenta (PMID: 21215447). The section was incubated with ab276132 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 minutes.



Western blot - Anti-Angiotensinogen antibody [EPR24118-2] (ab276132)

All lanes : Anti-Angiotensinogen antibody [EPR24118-2] (ab276132) at 1/1000 dilution

Lane 1 : Rat lung tissue lysate

Lane 2 : Rat liver tissue lysate

Lane 3 : Rat kidney tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) at 1/100000 dilution

Predicted band size: 53 kDa

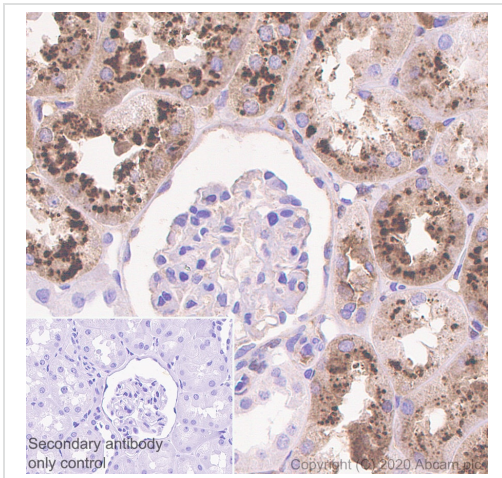
Observed band size: 48-70 kDa

Blocking and diluting buffer and concentration: 5% NFDm/TBST.

Angiotensinogen undergoes glycosylation. The molecular weight observed is consistent with what have been described in literature (PMID: 9694881).

This blot was developed using a higher sensitivity ECL substrate.

Exposure time: 127 seconds.

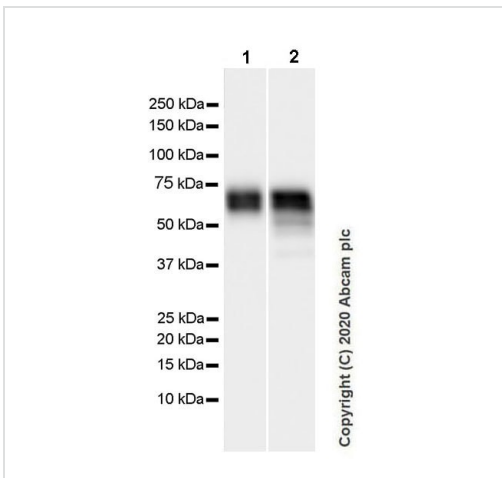


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Angiotensinogen antibody [EPR24118-2] (ab276132)

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling Angiotensinogen with ab276132 at 1/500 (0.854 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Cytoplasmic staining on human kidney. The section was incubated with ab276132 for 30 minutes at room temperature. The immunostaining was performed on a Leica Biosystems BOND[®] RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 minutes.



Western blot - Anti-Angiotensinogen antibody [EPR24118-2] (ab276132)

All lanes : Anti-Angiotensinogen antibody [EPR24118-2] (ab276132) at 1/1000 dilution

Lane 1 : Human plasma

Lane 2 : Rat plasma

Lysates/proteins at 20 µl per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/100000 dilution

Predicted band size: 53 kDa

Observed band size: 48-70 kDa

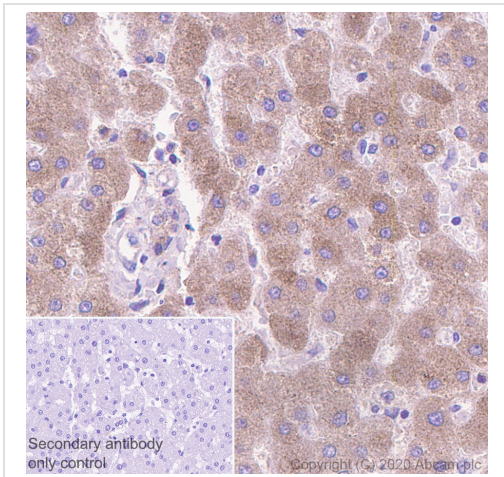
Blocking and diluting buffer and concentration: 5% NFD/MTBST.

Angiotensinogen undergoes glycosylation. The molecular weight observed is consistent with what have been described in literature(PMID: 9694881).

Exposure times:

Lane 1: 15 seconds

Lane 2: 3.25 seconds



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Angiotensinogen antibody [EPR24118-2] (ab276132)

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling Angiotensinogen with ab276132 at 1/500 (0.854 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Cytoplasmic staining on human liver. The section was incubated with ab276132 for 30 minutes at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 minutes.

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-Angiotensinogen antibody [EPR24118-2] (ab276132)

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