abcam

ab133263

Anti-Cytokeratin 18 antibody [EPR1626]

Anti-Cytokeratin 18 antibody [EPR1626] (ab133263) is a rabbit monoclonal antibody detecting Cytokeratin 18 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 30 publications

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR1626
Purification technique	Affinity purification Protein A
Concentration	0.137 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Rat

Dilution info	1/500 - 1/1000
Notes	Perform antigen retrieval before commencing with IHC staining protocol. 1:500 in human tissues / 1:1000 in rat tissues Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/500 - 1/1000
Notes	Perform antigen retrieval before commencing with IHC staining protocol. 1:500 in human tissues / 1:1000 in rat tissues Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

IP

Not recommended

Species	Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Rat
Dilution info	1/1000
Notes	For unpurified use at 1/10,000 - 1/50,000

Species	Human
Dilution info	1/1000
Notes	For unpurified use at 1/10,000 - 1/50,000

ICC/IF

Tested

Species	Human
Dilution info	1/50

Notes	For unpurified use at 1/250 - 1/500

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/20
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information KRT18

Function	Required for the formation of KRT8/KRT18 filaments that are involved in ARHGEF40-mediated actin stress fiber formation and tensional force-induced stress fiber formation and reinforcement (PubMed:26823019). Also acts downstream of ROCK kinase activation as part of a positive feedback mechanism in response to cellular mechanical stress loading (PubMed:26823019). Organization and orientation of KRT18 filaments are responsible for the properly elongated morphology of epithelial tubules (By similarity). Involved in the uptake of thrombin-antithrombin complexes by hepatic cells (By similarity). When phosphorylated, plays a role in filament reorganization. Involved in the delivery of mutated CFTR to the plasma membrane. Together with KRT8, is involved in interleukin-6 (IL-6)-mediated barrier protection.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

Notes

What is this antibody validated in?
Anti-Cytokeratin 18 antibody [EPR1626] (ab133263) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Rat samples.

What is the molecular weight of Cytokeratin 18?
Anti-Cytokeratin 18 [EPR1626] (ab133263) specifically detects a band for Cytokeratin 18 (UniProt: P05783) at a molecular weight of 48kDa.

Trusted by the scientific community
Anti-Cytokeratin 18 [EPR1626] (ab133263) was first used in a scientific publication in 2012 and has been cited over 30 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EPR1626] also available for your convenience: ab133263, Alexa Fluor® 488 - ab206091, Alexa Fluor® 647 - ab206269, HRP - ab207538, Carrier free - ab240054, PE - ab314249

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Cytokeratin 18 (CK18) also known as Keratin 18 or KRT18 is a type I intermediate filament protein with a molecular weight of approximately 45 kDa. It plays a mechanical role in stabilizing epithelial cell structure and function. CK18 is expressed in single-layered epithelial tissues such as the liver intestine and pancreas. It partners with the type II keratin usually KRT8 to form a stable cytoskeletal network in these cells providing structural integrity and resilience.
Biological function summary	CK18 maintains cellular integrity and mediates resistance to mechanical and non-mechanical stresses in epithelial cells. It forms heterodimers with KRT8 participating in a complex network of filaments important for maintaining cell shape and stability. This organization plays a role in managing cell survival during stress and apoptosis helping regulate cellular functions and responses in tissues where it is expressed.
Pathways	Cytokeratin 18 is involved in the apoptosis and cellular stress response pathways. It interacts with proteins such as caspases during apoptosis facilitating cytoskeletal reorganization and cell fragmentation. CK18 in coordination with KRT8 also participates in signaling pathways that regulate cell cycle and apoptotic processes underlining its importance in cellular turnover and tissue homeostasis.
Associated diseases and disorders	Elevated levels of CK18 fragments are often observed in cases of non-alcoholic steatohepatitis (NASH) and breast cancer. It serves as a biomarker for liver injury due to its abundance in hepatocytes and release upon cell death. In breast cancer alterations in CK18 expression can reflect disease progression where it interacts with other proteins such as vimentin indicating epithelial-to-mesenchymal transition a process that facilitates metastasis.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

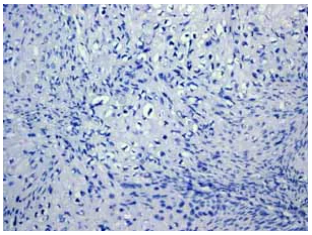
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

19 product images

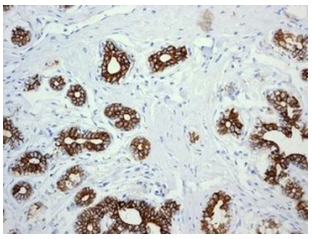


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 18 antibody

ab133263 showing negative staining in Cervical squamous carcinoma tissue.

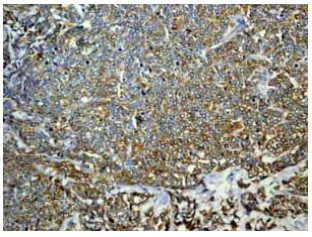
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 18 antibody

Immunohistochemical analysis of paraffin embedded Human breast tissue labelling Cytokeratin 18 with ab133263 at 1/250.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

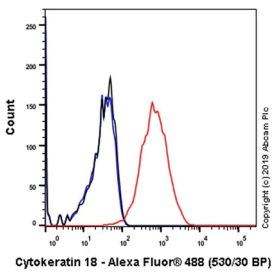


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 18 antibody

ab133263 showing positive staining in Breast carcinoma tissue.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

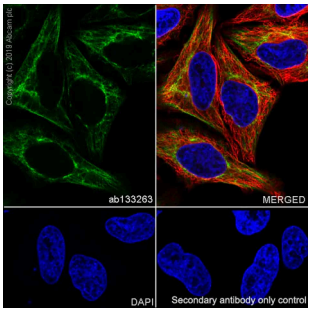


Flow Cytometry (Intracellular) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Flow Cytometry (Intracellular) staining using rabbit Anti-Cytokeratin 18 antibody

Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Cytokeratin 18 with Purified ab133263 at 1/20 dilution (10µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluorr® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit

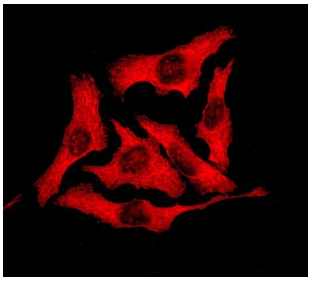
monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 18 antibody

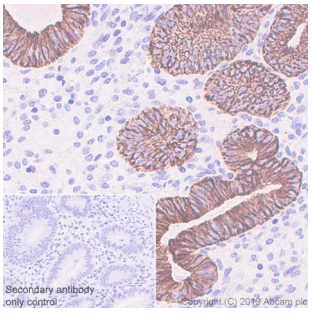
Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Cytokeratin 18 with Purified ab133263 at 1:50 dilution (2.26 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
Alexa Fluor® 488 (ab206091) and Alexa Fluor® 647 (ab206269) conjugated versions are available for this clone.



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 18 antibody

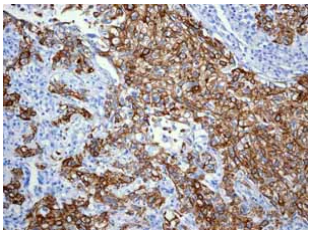
Immunofluorescence analysis of HeLa cells labelling Cytokeratin 18 with ab133263 at 1/250.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 18 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human endometrium tissue sections labeling Cytokeratin 18 with Purified ab133263 at 1:500 dilution (0.23 µg/ml). Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). Purified)ImmunoHistoProbe one step HRP Polymer (ready to use) was used for detection. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

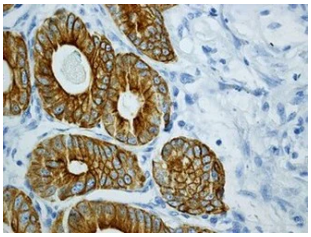


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 18 antibody

ab133263 showing positive staining in Lung adenocarcinoma tissue.

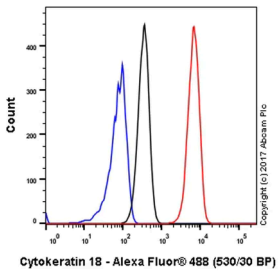
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 18 antibody

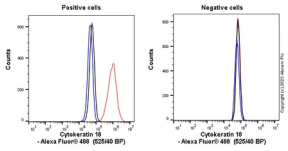
Immunohistochemical analysis of paraffin embedded Human gastric adenocarcinoma tissue labelling Cytokeratin 18 with ab133263 at 1/250.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Flow Cytometry (Intracellular) staining using rabbit Anti-Cytokeratin 18 antibody

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling Cytokeratin 18 with unpurified ab133263 at 1/20 dilution (10ug/ml) (red). Cells were fixed with 80% methanol and permeabilised with 0.1% Tween-20. A Goat anti rabbit IgG (Alexa Fluorr® 488) (ab150077) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) (ab172730) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



Flow Cytometry (Intracellular) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Flow Cytometry (Intracellular) staining using rabbit Anti-Cytokeratin 18 antibody

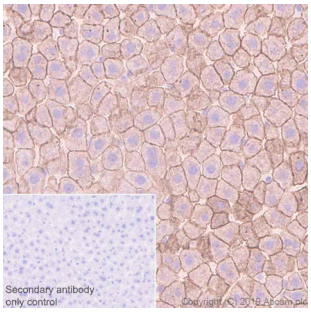
Flow cytometry overlay histogram showing left MCF7 positive cells and right negative A375 stained with ab133263 (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab133263) (1x 106 in 100µl at 0.04µg/ml (1/51000)) for 30min at 22°C.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min at 22°C

Isotype control antibody (black line) was Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.

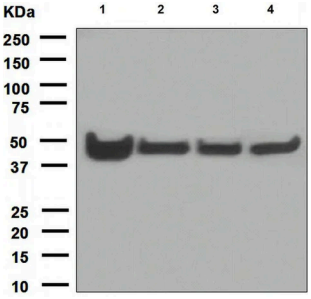
This antibody gave a positive signal in MCF7 Fixed with 80% methanol (5 min) / permeabilised with 0.1% PBS-Triton X-100 for 15 min under the same conditions.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 18 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat liver tissue sections labeling Cytokeratin 18 with Purified ab133263 at 1:1000 dilution (0.113 µg/ml). Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). Purified)ImmunoHistoProbe one step HRP Polymer (ready to use) was used for detection. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

All lanes:
Western blot - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263) at 1/10000 dilution

Lane 1:
MCF7 cell lysate at 10 µg

Lane 2:
HeLa cell lysate at 10 µg

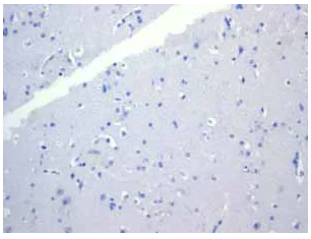
Lane 3:
Jurkat cell lysate at 10 µg

Lane 4:
A431 cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP conjugated antibody at 1/2000 dilution

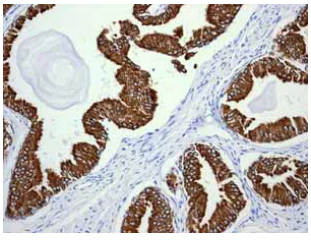
Predicted band size: 48 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

ab133263 showing negative staining in Normal brain tissue.

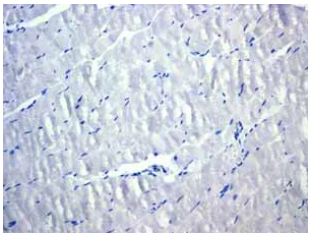
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

ab133263 showing positive staining in Prostatic carcinoma tissue.

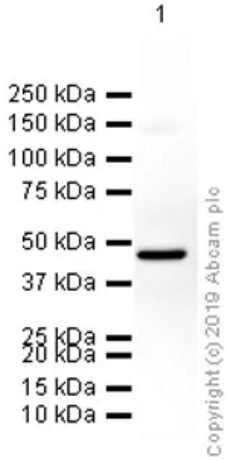
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

ab133263 showing negative staining in Skeletal muscle tissue.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

All lanes:
Western blot - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263) at 1/1000 dilution

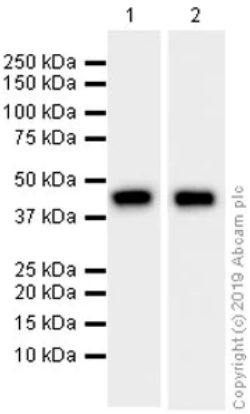
All lanes:
Rat liver lysates at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/5000 dilution

Predicted band size: 48 kDa

Observed band size: 45 kDa



Western blot - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

All lanes:
Western blot - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263) at 1/20000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 15 µg

Lane 2:
MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysates at 15 µg

Secondary

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

Predicted band size: 48 kDa

Observed band size: 45 kDa

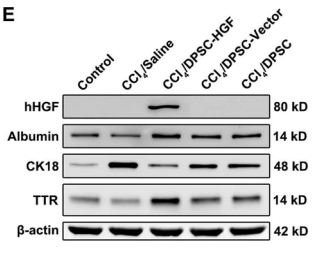


Image collected and cropped by CiteAb under a

Western blot - Anti-Cytokeratin 18 antibody [EPR1626] (ab133263)

Cytokeratin 18 Western blot staining using rabbit Anti-Cytokeratin 18 antibody

Cytokeratin 18 western blot using anti-Cytokeratin 18 antibody [EPR1626] ab133263. Publication image and figure legend from Cao, X. F., Jin, S. Z., et al., 2017, Sci Rep, PubMed 29150644.

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ab133263 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab133263 please see the product overview.

HGF overexpression in grafted DPSCs enhances the amelioration of cirrhosis in a rat cirrhosis model. (A,B) Images of the HE staining (A) and Masson's trichrome staining (B) of the liver tissue of rats. (C) Quantitative analysis of the Laennec fibrosis scoring for the liver tissue of rats. (D) Quantitative analyses of qPCR assays for the mRNA levels of albumin, CK18 and TTR in the liver tissue of rats. (E,F) Images of Western blot analyses for the protein expression of hHGF, albumin, CK18 and TTR in the liver tissue of rats (E) and the related quantitative analysis (F). Scale bars (A,B) = 200 μm. ns, nonsignificant; **p < 0.05; **p < 0.01; ***p < 0.001.

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