abcam

ab289971

Anti-HC-II antibody [EPR25618-1]

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	EPR25618-1
Purification technique	Affinity purification Protein A
Concentration	0.592 - 0.617 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information SERPIND1

Function	Thrombin inhibitor activated by the glycosaminoglycans, heparin or dermatan sulfate. In the presence of the latter, HC-II becomes the predominant thrombin inhibitor in place of antithrombin III (AT-III). Also inhibits chymotrypsin, but in a glycosaminoglycan-independent manner. Peptides at the N-terminal of HC-II have chemotactic activity for both monocytes and neutrophils. Isoform 2. Shows negligible inhibition, in vitro, of thrombin and tPA and no inhibition of factor Xa, in vitro.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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.

Supplementary info

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

Activity summary	HC-II also known as heparin cofactor II is an enzyme that acts as a serine protease inhibitor. It mainly inhibits thrombin playing a significant role in the regulation of coagulation. HC-II has an approximate molecular mass of 65 kDa and is primarily expressed in the liver and circulates in plasma. The HC protein is similar to another anticoagulant protein antithrombin but is specifically activated by dermatan sulfate.
Biological function summary	Heparin cofactor II plays an essential role in maintaining hemostatic balance. It does not function as part of a larger complex but individually regulates thrombin activity. HC-II inhibits fibrin formation and platelet aggregation controlling thrombin's role in the coagulation cascade. The activity of HC-II is important for keeping blood clot formation under control preventing excessive clot formation which can lead to vascular diseases.
Pathways	Heparin cofactor II works in the coagulation pathway where it closely interacts with thrombin. Dermatan sulfate enhances its inhibitory effects on thrombin distinct from the action of heparin on antithrombin. Its regulation of thrombin makes it an important component in the hemostatic pathway maintaining normal circulation by balancing blood clotting and bleeding.
Associated diseases and disorders	Heparin cofactor II is associated with thrombotic disorders including venous thromboembolism. Deficiency or malfunctioning of HC-II can lead to an increased risk of thrombosis due to inadequate inhibition of thrombin. Besides HC-II is

associated with atherosclerosis where its interaction with dermatan sulfate could influence the progression of vascular lesions. The protein's role in modulating thrombin activity further connects it to coagulation factor V which can also impact thrombotic disease processes.

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

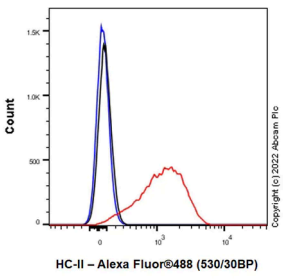
We do not recommend this combination. It is not covered by our product promise.

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.

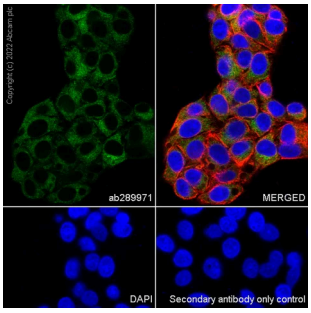
5 product images



Flow Cytometry (Intracellular) - Anti-HC-II antibody [EPR25618-1] (ab289971)

HC-II Flow Cytometry (Intracellular) staining using rabbit Anti-HC-II antibody

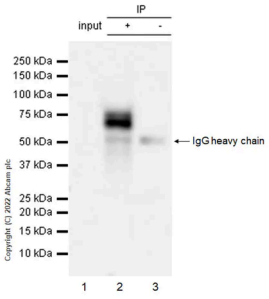
Flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized HepG2 (Human hepatocellular carcinoma epithelial cell) cells labelling HC-II with ab289971 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-HC-II antibody [EPR25618-1] (ab289971)

HC-II Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-HC-II antibody

Immunofluorescent analysis of 100% Methanol-fixed, 0.1% TritonX-100 permebilized HepG2 cells labelling HC-II with ab289971 at 1/50 dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed 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 ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.



Immunoprecipitation - Anti-HC-II antibody [EPR25618-1] (ab289971)

HC-II was immunoprecipitated from HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate with ab289971 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab289971 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.
Lane 1: HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate 10 ug

Lane 2: ab289971 IP in HepG2 whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab289971 in HepG2 whole cell lysate

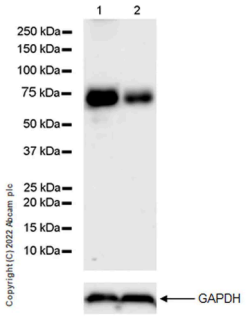
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 10 seconds

All lanes:
Immunoprecipitation - Anti-HC-II antibody [EPR25618-1] (ab289971)

Predicted band size: 57 kDa

Observed band size: 66-75 kDa



Western blot - Anti-HC-II antibody [EPR25618-1] (ab289971)

HC-II Western blot staining using rabbit Anti-HC-II antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST
All these lysates are RIPA buffer.

Exposure time: 59 seconds

All lanes:
Western blot - Anti-HC-II antibody [EPR25618-1] (ab289971) at 1/1000 dilution

Lane 1:
HepG2 (human hepatocellar carcinoma epithelial cell) transfected with scrambled siRNA control, whole cell lysate at 20 µg

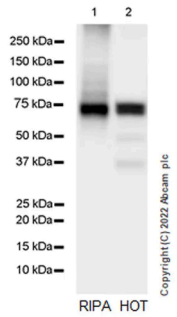
Lane 2:
HepG2 transfected with HC-II siRNA, whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/50000 dilution

Predicted band size: 57 kDa

Observed band size: 66-75 kDa



Western blot - Anti-HC-II antibody [EPR25618-1] (ab289971)

HC-II Western blot staining using rabbit Anti-HC-II antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST
Exposure time: 15 seconds

All lanes:
Western blot - Anti-HC-II antibody [EPR25618-1] (ab289971) at 1/1000 dilution

Lane 1:
Human liver tissue lysate(RIPA) at 20 µg

Lane 2:
Human liver tissue lysate(HOT) at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 57 kDa

Observed band size: 66-75 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.