abcam

ab317604

Anti-PAI1 antibody [EPR21850-262]

Recombinant | RabMAb | KO Validated | 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	EPR21850-262
Purification technique	Affinity purification Protein A
Concentration	0.537 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/5000
Notes	-

Expected

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

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

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

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information SERPINE1

Function	Serine protease inhibitor. Inhibits TMPRSS7 (PubMed:15853774). Is a primary inhibitor of tissue-type plasminogen activator (PLAT) and urokinase-type plasminogen activator (PLAU). As PLAT inhibitor, it is required for fibrinolysis down-regulation and is responsible for the controlled degradation of blood clots

(PubMed:17912461, PubMed:8481516, PubMed:9207454, PubMed:21925150). As PLAU inhibitor, it is involved in the regulation of cell adhesion and spreading (PubMed:9175705). Acts as a regulator of cell migration, independently of its role as protease inhibitor (PubMed:15001579, PubMed:9168821). It is required for stimulation of keratinocyte migration during cutaneous injury repair (PubMed:18386027). It is involved in cellular and replicative senescence (PubMed:16862142). Plays a role in alveolar type 2 cells senescence in the lung (By similarity). Is involved in the regulation of cementogenic differentiation of periodontal ligament stem cells, and regulates odontoblast differentiation and dentin formation during odontogenesis (PubMed:25808697, PubMed:27046084).

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.

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

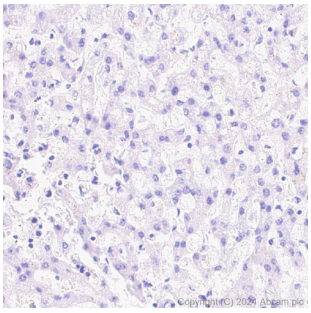
We do not recommend this combination. It is not covered by our product promise.

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.

14 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAI1 antibody [EPR21850-262] (ab317604)

PAI1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human liver using rabbit Anti-PAI1 antibody

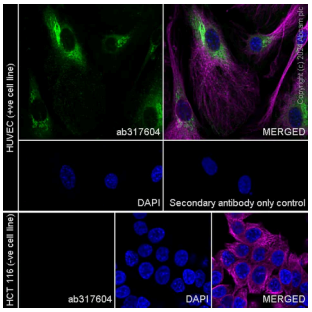
Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling PAI1 with ab317604 at 1/100 (5.16 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression: almost no staining on human liver. The section was incubated with ab317604 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 LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



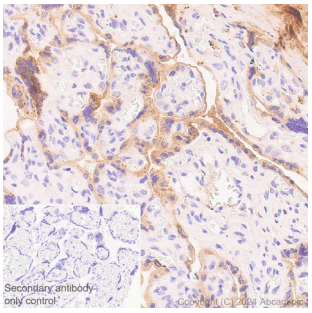
Immunocytochemistry/ Immunofluorescence - Anti-PAI1 antibody [EPR21850-262] (ab317604)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HUVEC (human umbilical vein endothelial cell) cells labelling PAI1 with ab317604 at 1/500 (1.032 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/mL dilution (Green).

Confocal image showing cytoplasmic staining in HUVEC cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labeled with DAPI (shown in blue). Negative control: HCT 116 (PMID: 32344898).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Magenta). 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 2 ug/mL dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAI1 antibody [EPR21850-262] (ab317604)

Immunohistochemical analysis of paraffin-embedded Human placenta tissue labeling PAI1 with ab317604 at 1/100 (5.16 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

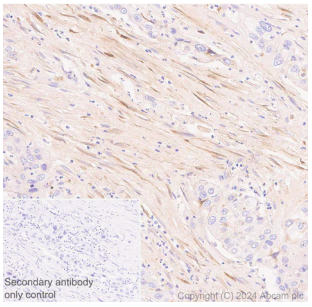
Positive staining on human placenta (PMID: 18440126). The section was incubated with ab317604 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAI1 antibody [EPR21850-262] (ab317604)

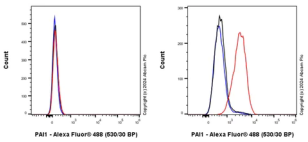
Immunohistochemical analysis of paraffin-embedded Human bladder carcinoma tissue labeling PAI1 with ab317604 at 1/100 (5.16 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human bladder carcinoma. The section was incubated with ab317604 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 LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

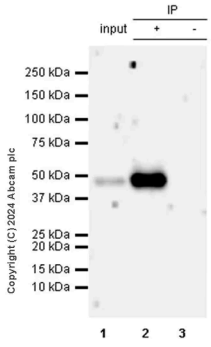


Flow Cytometry (Intracellular) - Anti-PAI1 antibody [EPR21850-262] (ab317604)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HCT 116 (human colorectal carcinoma epithelial cell, Left) / HUVEC (human umbilical vein endothelial cell, Right) cells labelling PAI1 with ab317604 at 1/5000 dilution (0.01 ug)/Red (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).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Negative control: HCT 116



Immunoprecipitation - Anti-PAI1 antibody [EPR21850-262] (ab317604)

PAI1 was immunoprecipitated from 0.35 mg HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate with ab317604 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab317604 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
Lane 2: ab317604 IP in HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab317604 in HepG2 whole cell lysate

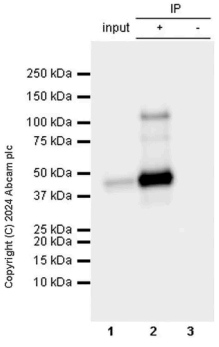
All lanes:
Immunoprecipitation - Anti-PAI1 antibody [EPR21850-262] (ab317604) at 1/30 dilution

All lanes:
HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 180s



Immunoprecipitation - Anti-PAI1 antibody [EPR21850-262] (ab317604)

PAI1 was immunoprecipitated from 0.35 mg HUVEC (human umbilical vein endothelial cell) whole cell lysate with ab317604 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab317604 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: HUVEC (human umbilical vein endothelial cell) whole cell lysate
Lane 2: ab317604 IP in HUVEC (human umbilical vein endothelial cell) whole cell lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab317604 in HUVEC whole cell lysate

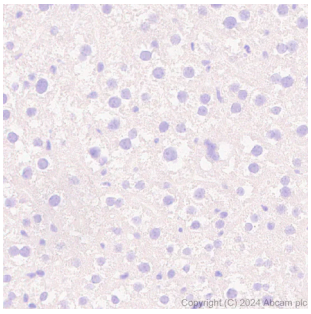
The band at approximately100 kDa may represent PAI-1 in complex with its target protease, t-PA (PMID 21596853, 22069469). This has not been confirmed with additional tests.
All lanes:
Immunoprecipitation - Anti-PAI1 antibody [EPR21850-262] (ab317604) at 1/30 dilution

All lanes:
HUVEC (human umbilical vein endothelial cell) whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 3s



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAI1 antibody [EPR21850-262] (ab317604)

PAI1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse liver using rabbit Anti-PAI1 antibody

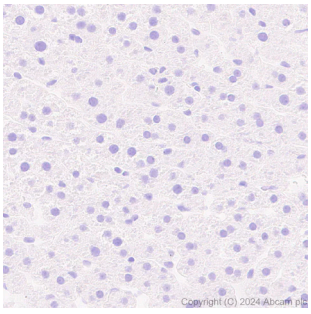
Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling PAI1 with ab317604 at 1/500 (0.516 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression: no staining on mouse liver. The section was incubated with ab317604 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 LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAI1 antibody [EPR21850-262] (ab317604)

PAI1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat liver using rabbit Anti-PAI1 antibody

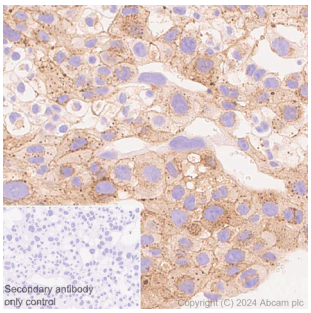
Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling PAI1 with ab317604 at 1/500 (1.032 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression: no staining on rat liver. The section was incubated with ab317604 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 LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAI1 antibody [EPR21850-262] (ab317604)

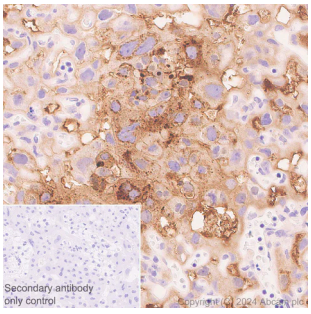
Immunohistochemical analysis of paraffin-embedded Rat placenta tissue labeling PAI1 with ab317604 at 1/500 (1.032 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on rat placenta. The section was incubated with ab317604 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 LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAI1 antibody [EPR21850-262] (ab317604)

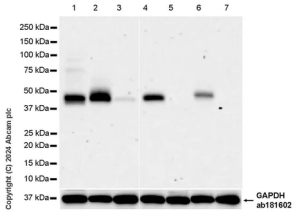
Immunohistochemical analysis of paraffin-embedded Mouse placenta tissue labeling PAI1 with ab317604 at 1/500 (1.032 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on mouse placenta. The section was incubated with ab317604 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 LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Western blot - Anti-PAI1 antibody [EPR21850-262] (ab317604)

PAI1 Western blot staining using rabbit Anti-PAI1 antibody

Low expression: liver (PMID: 21898503).

Lanes 1-3 are applied with Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 and lanes 4-7 are applied with Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-PAI1 antibody [EPR21850-262] (ab317604) at 1/1000 dilution

Lane 1:
Human lung cancer tissue lysate at 20 µg

Lane 2:
Human placenta tissue lysate at 20 µg

Lane 3:
Human liver tissue lysate at 20 µg

Lane 4:
Mouse placenta tissue lysate at 20 µg

Lane 5:
Mouse liver tissue lysate at 20 µg

Lane 6:
Rat placenta tissue lysate at 20 µg

Lane 7:
Rat liver tissue lysate at 20 µg

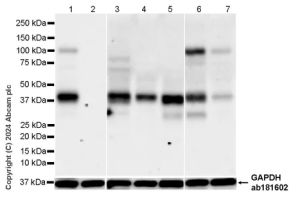
Secondary

Lanes 1 - 3:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Lanes 4 - 7:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 45 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-PAI1 antibody [EPR21850-262] (ab317604)

PAI1 Western blot staining using rabbit Anti-PAI1 antibody

Negative control: HCT 116 (PMID: 32344898).

Low expression: NIH/3T3 (PMID: 16258002).

The band at approximately 100 kDa may represent PAI-1 in complex with its target protease, t-PA (PMID 21596853, 22069469). This has not been confirmed with additional tests.

The lanes 3-7 were developed using a high sensitivity ECL substrate.

The identity of the lower MW band at approximately 30 kDa (in lanes 5-6) is unknown.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

Exposure time: Lanes 1-2: 48 seconds; Lane 3-7: 180 seconds.

All lanes:
Western blot - Anti-PAI1 antibody [EPR21850-262] (ab317604) at 1/1000 dilution

Lane 1:
HUVEC (human umbilical vein endothelial cell) whole cell lysate at 20 µg

Lane 2:

HCT 116 (human colorectal carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
A549 (human lung carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 4:
HepG2 (human hepatocellar carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 5:
SW480 (human colorectal adenocarcinoma epithelial cell) whole cell lysate at 20 µg

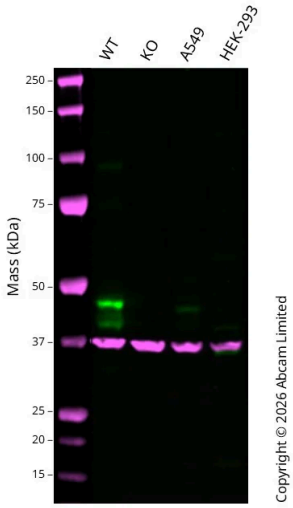
Lane 6:
Hepa1-6 (mouse hepatoma epithelial cell) whole cell lysate at 20 µg

Lane 7:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Secondary

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

Observed band size: 45 kDa, 36 kDa



Western blot - Anti-PAI1 antibody [EPR21850-262] (ab317604)

PAI1 Western blot staining using rabbit Anti-PAI1 antibody

Western blot: Anti-PAI1 antibody [EPR21850-262] ab317604 staining at 1/1000 dilution, shown in green; Mouse anti GAPDH ab8245 loading control staining at 1/20000 dilution, shown in magenta. A band was observed at 45 kDa in Wild-type U-87 MG cell lysates with no signal observed at this size in SERPINE1 knockout U-87 MG cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW and Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-PAI1 antibody [EPR21850-262] (ab317604) at 1/1000 dilution

Lane 1:
Wild-type U-87 MG cell lysates at 20 µg

Lane 2:
Western blot - Human SERPINE1 knockout U-87 MG cell line (ab306851) at 20 µg

Lane 3:
A549 cell lysates at 20 µg

Lane 4:
HEK-293 cell lysates at 20 µg

Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 45 kDa

Observed band size: 45 kDa

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