abcam

Product datasheet

Anti-TIMP1 antibody [EPR18352] ab211926

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-TIMP1 antibody [EPR18352]
Description	Rabbit monoclonal [EPR18352] to TIMP1
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB, ICC/IF
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant full length protein. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human prostate cancer lysate; HeLa, SK-OV-3, HT-29, and U-87 MG whole cell lysates. IHC-P: Human colon, pancreas, lung cancer, medullary thyroid carcinoma and prostate cancer tissues. ICC/IF: SK-OV-3 and HT-29 cells.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR18352

Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab211926 in the following tested applications.

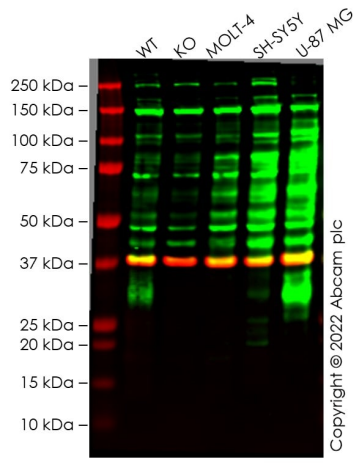
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P	★★★★★ (3)	1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB	★★★☆☆ (1)	1/1000. Detects a band of approximately 26 kDa (predicted molecular weight: 23 kDa).
ICC/IF	★★★★☆ (3)	1/500.

Target

Function	Complexes with metalloproteinases (such as collagenases) and irreversibly inactivates them by binding to their catalytic zinc cofactor. Also mediates erythropoiesis in vitro; but, unlike IL-3, it is species-specific, stimulating the growth and differentiation of only human and murine erythroid progenitors. Known to act on MMP-1, MMP-2, MMP-3, MMP-7, MMP-8, MMP-9, MMP-10, MMP-11, MMP-12, MMP-13 and MMP-16. Does not act on MMP-14.
Sequence similarities	Belongs to the protease inhibitor I35 (TIMP) family. Contains 1 NTR domain.
Post-translational modifications	The activity of TIMP1 is dependent on the presence of disulfide bonds.
Cellular localization	Secreted.

Images



Western blot - Anti-TIMP1 antibody [EPR18352] (ab211926)

All lanes : Anti-TIMP1 antibody [EPR18352] (ab211926) at 1/1000 dilution

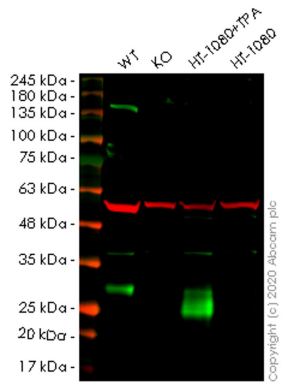
Lane 1 : Wild-type HeLa cell lysate
Lane 2 : TIMP1 knockout HeLa cell lysate
Lane 3 : MOLT-4 cell lysate
Lane 4 : SH-SY5Y cell lysate
Lane 5 : U-87 MG cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 23 kDa
Observed band size: 30 kDa

False colour image of Western blot: Anti-TIMP1 antibody [EPR18352] staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (**ab8245**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab211926 was shown to bind specifically to TIMP1. A band was observed at 30 kDa in wild-type HeLa cell lysates with no signal observed at this size in TIMP1 knockout cell line **ab264022** (knockout cell lysate **ab260091**). The identity of bands observed at higher molecular weights has not been determined. To generate this image, wild-type and TIMP1 knockout HeLa cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution 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 IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



Western blot - Anti-TIMP1 antibody [EPR18352] (ab211926)

All lanes : Anti-TIMP1 antibody [EPR18352] (ab211926) at 1/1000 dilution

Lane 1 : Wild-type HeLa cell lysate
Lane 2 : TIMP1 knockout HeLa cell lysate
Lane 3 : HT-1080 treated with 200ng/ml 12-O Tetradecanoylphorbol-13-acetate (TPA) for 24 hours, cell lysate
Lane 4 : Untreated HT-1080 cell lysate

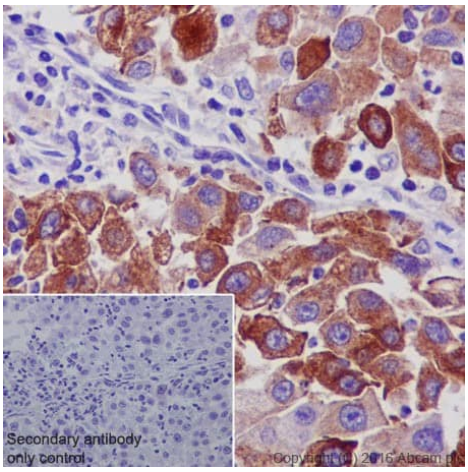
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) at 1/10000 dilution

Predicted band size: 23 kDa
Observed band size: 26 kDa

False colour image of Western blot: Anti-TIMP1 antibody [EPR18352] staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (**ab8245**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab211926 was shown to bind specifically to TIMP1. A band was observed at 30 kDa in wild-type HeLa cell lysates with no signal observed at this size in TIMP1 knockout cell line **ab264022** (knockout cell lysate **ab260091**). The identity of bands observed at higher molecular weights has not been determined. To generate this image, wild-type and TIMP1 knockout HeLa cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution 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 IgG H&L 800CW and Goat

anti-Mouse IgG H&L 680RD at 1/20000 dilution.

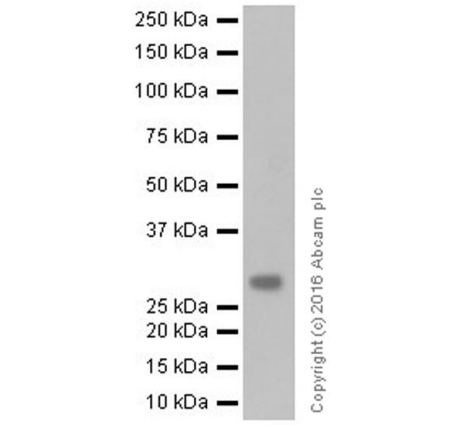


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TIMP1 antibody [EPR18352] (ab211926)

Immunohistochemical analysis of paraffin-embedded human lung cancer tissue labeling TIMP1 with ab211926 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasmic staining on human lung cancer is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-TIMP1 antibody [EPR18352] (ab211926)

Anti-TIMP1 antibody [EPR18352] (ab211926) at 1/1000 dilution + Human prostate cancer lysate at 10 µg

Secondary

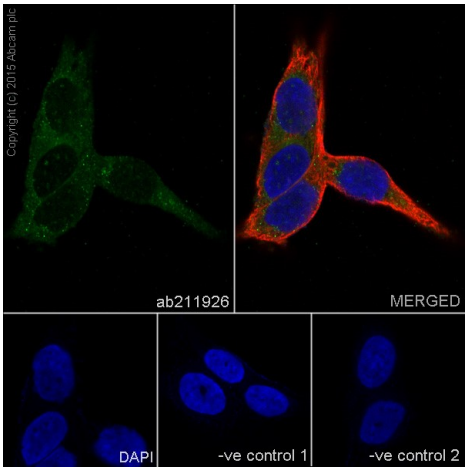
Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 23 kDa
Observed band size: 26 kDa

Exposure time: 5 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 16517973).

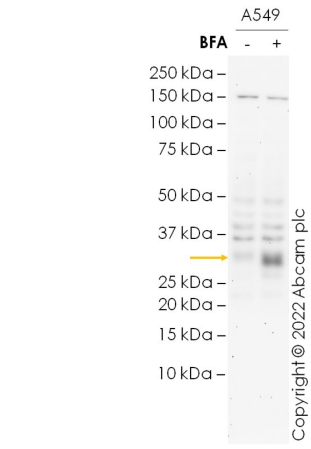


Immunocytochemistry/ Immunofluorescence - Anti-TIMP1 antibody [EPR18352] (ab211926)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized SK-OV-3 (Human ovarian cancer cell line) cells labeling TIMP1 with ab211926 at 1/500 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on SK-OV-3 cell line. The nuclear counter stain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin mouse MAb (**ab7291**) at 1/1000 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (**ab150120**) secondary antibody at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab211926 at 1/500 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (**ab150120**) secondary antibody at 1/1000 dilution.
-ve control 2: Anti-alpha Tubulin mouse MAb (**ab7291**) at 1/1000 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution.



Western blot - Anti-TIMP1 antibody [EPR18352] (ab211926)

All lanes : Anti-TIMP1 antibody [EPR18352] (ab211926) at 1/1000 dilution

Lane 1 : A549 Vehicle Control BFA (0 u/mL, 6 h) cell lysate
Lane 2 : A549 Treated BFA (5 u/mL, 6 h) cell lysate

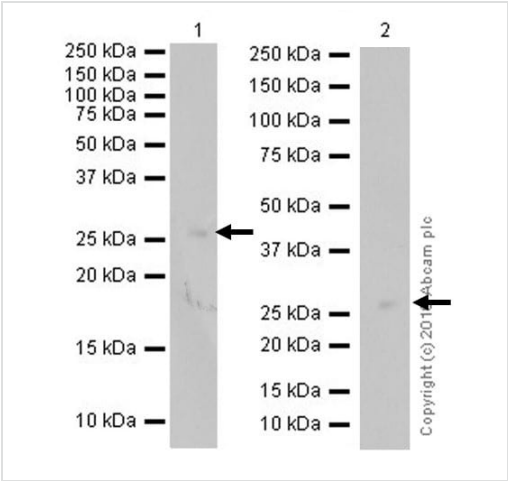
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 23 kDa
Observed band size: 30 kDa

False colour image of Western blot: Anti-TIMP1 antibody

[EPR18352] staining at 1/1000 dilution, shown in black. In Western blot, ab211926 was shown to bind specifically to TIMP1. First, 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 before development with Optiblot (ECL reagent **ab133456**) and imaged with 20 minutes exposure time. Secondary antibodies used were HRP conjugated Goat anti-Rabbit (H+L) at 1/50000 dilution and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



Western blot - Anti-TIMP1 antibody [EPR18352] (ab211926)

All lanes : Anti-TIMP1 antibody [EPR18352] (ab211926) at 1/1000 dilution

Lane 1 : HT-29 (Human colorectal adenocarcinoma cell line) whole cell lysate
Lane 2 : SK-OV-3 (Human ovarian cancer cell line) whole cell lysate

Lysates/proteins at 10 µg per lane.

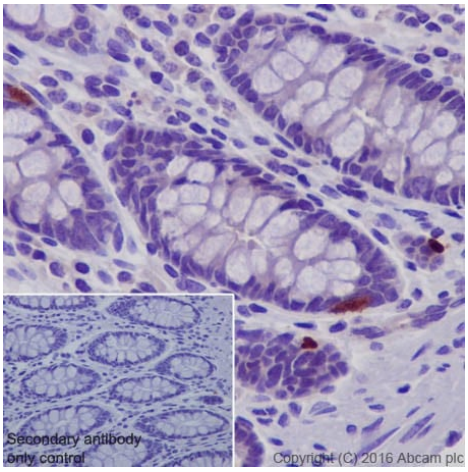
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 23 kDa
Observed band size: 26 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.

Binding in these cell lines was extremely weak and requires optimization.

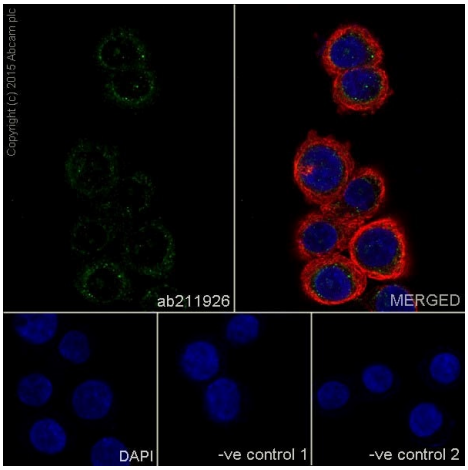


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TIMP1 antibody [EPR18352] (ab211926)

Immunohistochemical analysis of paraffin-embedded human colon tissue labeling TIMP1 with ab211926 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasmic staining on human colon neuroendocrine cell is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

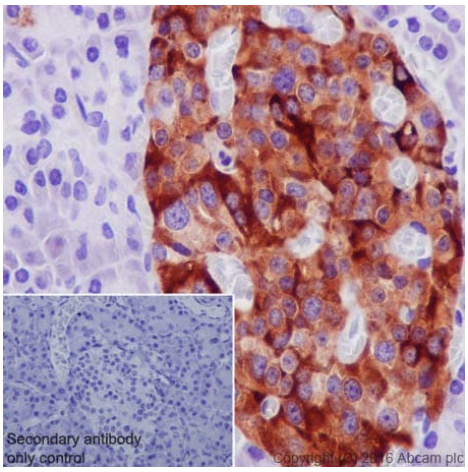


Immunocytochemistry/ Immunofluorescence - Anti-TIMP1 antibody [EPR18352] (ab211926)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HT-29 (Human colorectal adenocarcinoma cell line) cells labeling TIMP1 with ab211926 at 1/500 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on HT-29 cell line. The nuclear counter stain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin mouse MAb (**ab7291**) at 1/1000 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (**ab150120**) secondary antibody at 1/1000 dilution (red).

The negative controls are as follows:
-ve control 1: ab211926 at 1/500 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) (**ab150120**) secondary antibody at 1/1000 dilution.
-ve control 2: Anti-alpha Tubulin mouse MAb (**ab7291**) at 1/1000 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution.

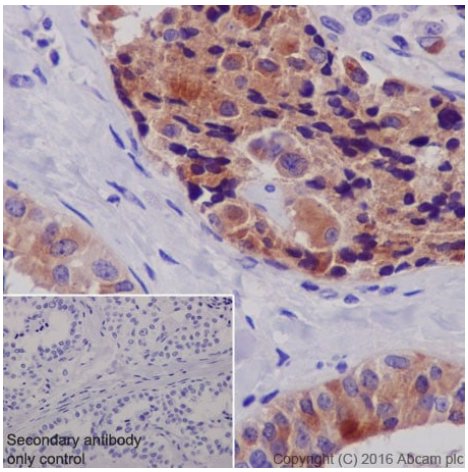


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TIMP1 antibody [EPR18352] (ab211926)

Immunohistochemical analysis of paraffin-embedded human pancreas tissue labeling TIMP1 with ab211926 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasmic staining on human islet is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

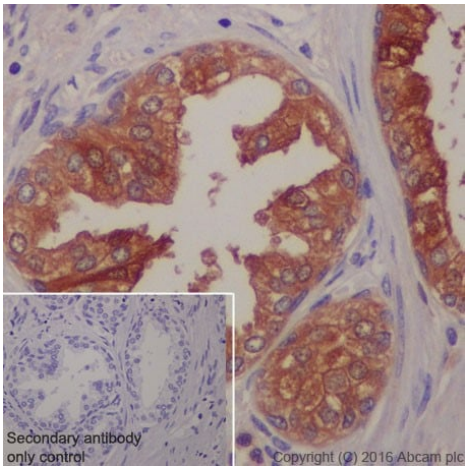


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TIMP1 antibody [EPR18352] (ab211926)

Immunohistochemical analysis of paraffin-embedded human medullary thyroid carcinoma tissue labeling TIMP1 with ab211926 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasmic staining on human medullary thyroid carcinoma is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

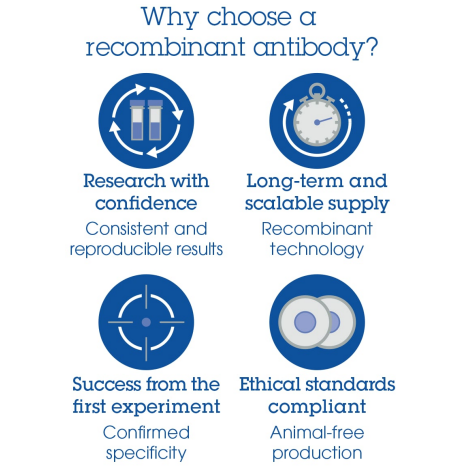


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TIMP1 antibody [EPR18352] (ab211926)

Immunohistochemical analysis of paraffin-embedded human prostate cancer tissue labeling TIMP1 with ab211926 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasmic staining on human prostate cancer is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Anti-TIMP1 antibody [EPR18352] (ab211926)

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