abcam

Product datasheet

Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] ab179800

KO 評価済 リコンビナント RabMAb

3 Abreviews 87 References 画像数 20

製品の概要

製品名	Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012]
製品の詳細	Rabbit monoclonal [EPR12012] to COX2 / Cyclooxygenase 2
由来種	Rabbit
特異性	Stimulation is required to allow detection of the COX2 protein in some cell lines and tissues. It is better to use a positive control side by side when testing. Rat species is recommended based on IHC result, we do not guarantee WB, IP and ICC/IF for Rat.
アプリケーション	**適用あり:** WB, IP, ICC/IF, IHC-P **適用なし:** Flow Cyt
種交差性	**交差種:** Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: A549, U-87 MG and HeLa cell lysates; mouse spleen tissue lysate, PTGS2 (COX2 / Cyclooxygenase 2) KO A549 (Human lung carcinoma epithelial cell) cell lysate, Wild-type A549 cell lysate, U-87 MG whole cell lysate, MCF7 whole cell lysate. Mouse B16-F10 and Raw 264.7 whole cell lysate. Mouse retina, hippocampus, heart and kidney tissue lysate. IHC-P: Human colonic carcinoma, lung carcinoma, liver and colon tissues: rat kidney tissue; mouse kidney and liver tissue. IP: A549 cell lysate ICC: U-87 MG cells
特記事項	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**.

製品の特性

製品の状態	Liquid
保存方法	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.
バッファー	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
精製度	Protein A purified
ポリ/モノ	モノクローナル
クローン名	EPR12012
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、** 次のテスト済みアプリケーションにおけるab179800の使用に適用されます

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

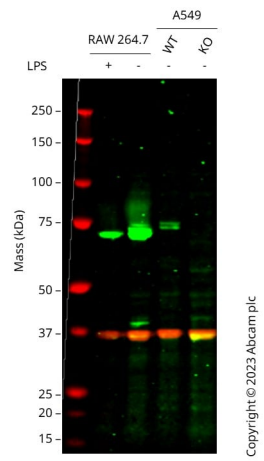
アプリケーション	Abreviews	特記事項
WB	★★★★☆ (1)	1/1000 - 1/5000. Predicted molecular weight: 69 kDa.
IP		1/10 - 1/100.
ICC/IF		Use at an assay dependent concentration.
IHC-P	★★★★★ (2)	1/100 - 1/4000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**.

追加情報	Is unsuitable for Flow Cyt.

ターゲット情報

機能	Mediates the formation of prostaglandins from arachidonate. May have a role as a major mediator of inflammation and/or a role for prostanoid signaling in activity-dependent plasticity.
パスウェイ	Lipid metabolism; prostaglandin biosynthesis.
配列類似性	Belongs to the prostaglandin G/H synthase family. Contains 1 EGF-like domain.
翻訳後修飾	S-nitrosylation by NOS2 (iNOS) activates enzme activity. S-nitrosylation may take place on different Cys residues in addition to Cys-561.
細胞内局在	Microsome membrane. Endoplasmic reticulum membrane.

画像



Western blot - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

All lanes : Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800) at 1/1000 dilution

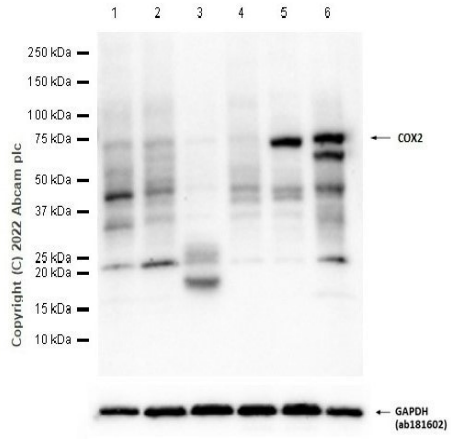
Lane 1 : RAW 264.7 Control LPS (0 ng/mL, 4 h) cell lysate
Lane 2 : RAW 264.7 Treated LPS (100 ng/mL, 4 h) cell lysate
Lane 3 : Wild-type A549 **ab277305** cell lysate
Lane 4 : PTGS2 knockout A549 **ab283802** cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 69 kDa
Observed band size: 69 kDa

Western blot: Anti-PTGS2 antibody [EPR12012] (ab179800) 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, ab179800 was shown to bind specifically to PTGS2. A band was observed at 69 kDa in wild-type RAW 264.7 cell lysates with no signal observed at this size in PTGS2 knockout cell line. To generate this image, wild-type and PTGS2 knockout RAW 264.7 cell lysates were analysed. 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 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-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

All lanes : Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800) at 1/1000 dilution

Lane 1 : B16-F10 (Mouse skin melanoma) whole cell lysate
Lane 2 : Raw 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate
Lane 3 : Mouse retina tissue lysate
Lane 4 : Mouse hippocampus tissue lysate
Lane 5 : Mouse heart tissue lysate
Lane 6 : Mouse kidney tissue lysate

Lysates/proteins at 20 µg per lane.

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

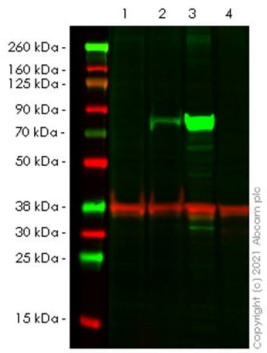
Predicted band size: 69 kDa
Observed band size: 72 kDa

Exposure time: 60 seconds

Blocking buffer and concentration: 5% NFDM/TBST

Diluting buffer and concentration: 5% NFDM/TBST

COX2 is expressed at a low level in Raw264.7, mouse retina, hippocampus, heart, kidney etc. (PMID: 22015457, PMID: 26001832, PMID: 23045674, PMID: 33737575).



Western blot - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

All lanes : Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800) at 1/1000 dilution

Lane 1 : PTGS2 (COX2 / Cyclooxygenase 2) KO A549 (Human lung carcinoma epithelial cell) cell lysate with Intercept® (TBS) Blocking Buffer diluted with an equal volume of 0.1% TBS
Lane 2 : Wild-type A549 cell lysate with Intercept® (TBS) Blocking Buffer diluted with an equal volume of 0.1% TBS
Lane 3 : U-87 MG (Human glioblastoma-astrocytoma epithelial cell) whole cell lysate with Intercept® (TBS) Blocking Buffer diluted with an equal volume of 0.1% TBS
Lane 4 : MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate with Intercept® (TBS) Blocking Buffer diluted with an equal volume of 0.1% TBS

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) at 1/100000 dilution

Performed under reducing conditions.

Predicted band size: 69 kDa
Observed band size: 74 kDa

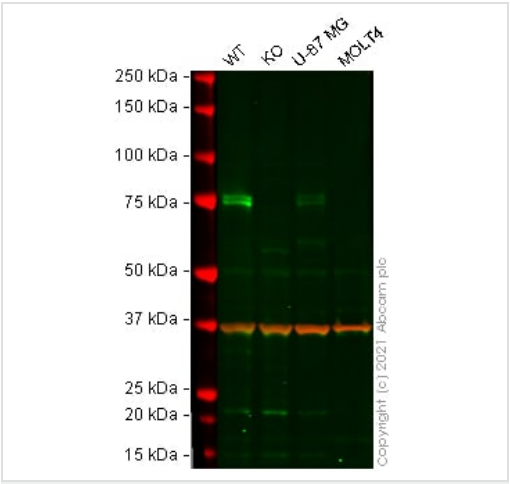
Negative control: MCF7 (PMID: 24325753, PMID: 16997132)

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

False colour image of Western blot: Anti- COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800) 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, ab179800 was shown to bind specifically to COX2 / Cyclooxygenase 2. Target band was observed at 74 kDa in wild-type A549 cell lysates with no signal observed at this size in COX2 / Cyclooxygenase 2 knockout cell line **ab280802**. To generate this image, wild-type and COX2 / Cyclooxygenase 2 knockout A549 cell lysates were analyzed. 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 then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) at 1/20000 dilution.



Western blot - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

All lanes : Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800) at 1/1000 dilution

Lane 1 : Wild-type A549 cell lysate
Lane 2 : PTGS2 knockout A549 cell lysate
Lane 3 : U-87 MG cell lysate
Lane 4 : MOLT-4 cell lysate

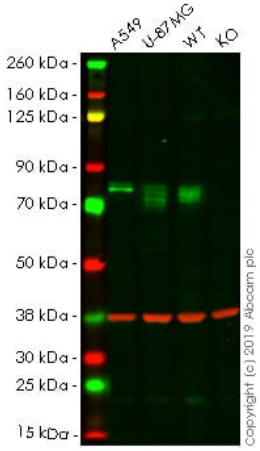
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 69 kDa

False colour image of Western blot: Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] 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, ab179800 was shown to bind specifically to COX2 / Cyclooxygenase 2. A band was observed at 75 kDa in wild-type A549 cell lysates with no signal observed at this size in PTGS2 knockout cell line **ab280802** (knockout cell lysate **ab283825**). To generate this image, wild-type and PTGS2 knockout A549 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 (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) at 1/20000 dilution.



Western blot - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

All lanes : Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800) at 1/1000 dilution

Lane 1 : A549 cell lysate
Lane 2 : U-87 MG cell lysate
Lane 3 : Wild-type HeLa cell lysate
Lane 4 : PTGS2 knockout HeLa cell lysate

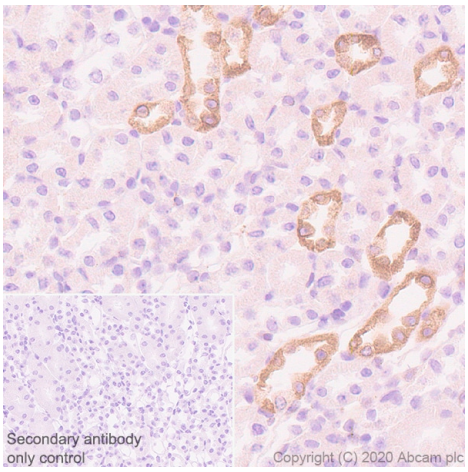
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 69 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab179800 observed at 75 kDa. Red - loading control, **ab8245** observed at 37 kDa.

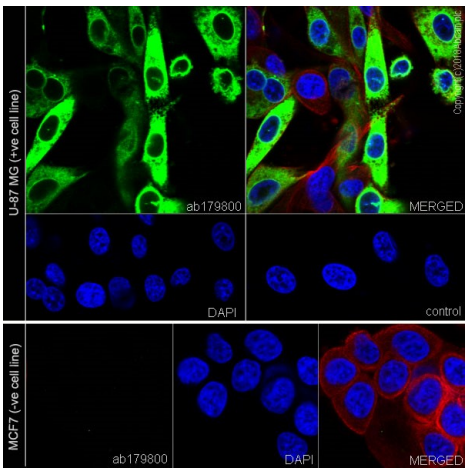
ab179800 was shown to react with COX2 / Cyclooxygenase 2 in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab255420** (knockout cell lysate **ab263795**) was used. Wild-type and COX2 / Cyclooxygenase 2 knockout samples were subjected to SDS-PAGE. ab179800 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue sections labeling COX2 / Cyclooxygenase 2 with purified ab179800 at 1/4000 dilution (0.125 µg/ml).

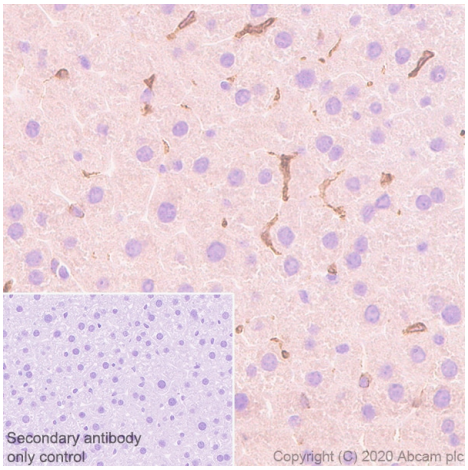
Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as the secondary antibody. Negative control: secondary antibody only control. Hematoxylin was used as a counterstain.



Immunocytochemistry/ Immunofluorescence - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

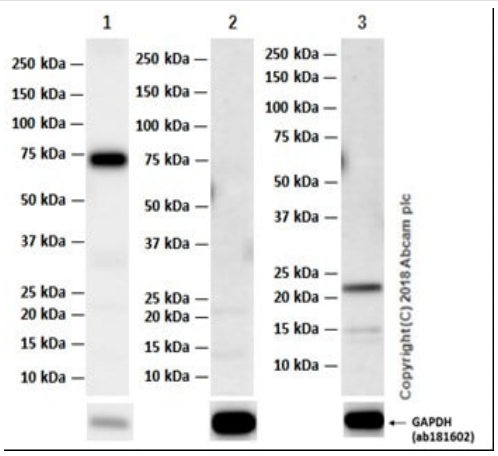
Immunocytochemistry/ Immunofluorescence analysis of U-87 MG (human glioblastoma-astrocytoma epithelial cell) cells labeling COX2 / Cyclooxygenase 2 with ab179800 at 1/50 dilution. **ab150077** (AlexaFluor®488 Goat anti-Rabbit) at 1/1000 was used as secondary antibody. Cells were fixed with 4% Paraformaldehyde and permeabilised with 0.1% TritonX-100. **ab195889**, Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1/200 was used as counterstain. Nuclie were stained blue with DAPI.

Confocal image showing cytoplasmic staining in U-87 MG cell line. Negative control: MCF7（PMID: 18199541）



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse liver tissue sections labeling COX2 / Cyclooxygenase 2 with purified ab179800 at 1/4000 dilution (0.125 µg/ml).
Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as the secondary antibody. Negative control: secondary antibody only control. Hematoxylin was used as a counterstain.



Western blot - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

All lanes : Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800) at 1/1000 dilution (Purified)

Lane 1 : U-87 MG (human glioblastoma-astrocytoma epithelial cell line) whole cell lysate with 5% NFDM/TBST
Lane 2 : HCT 116 (human colorectal carcinoma cell line) whole cell lysate with 5% NFDM/TBST
Lane 3 : MCF7 (human breast adenocarcinoma cell line) whole cell lysate with 5% NFDM/TBST

Lysates/proteins at 20 µg per lane.

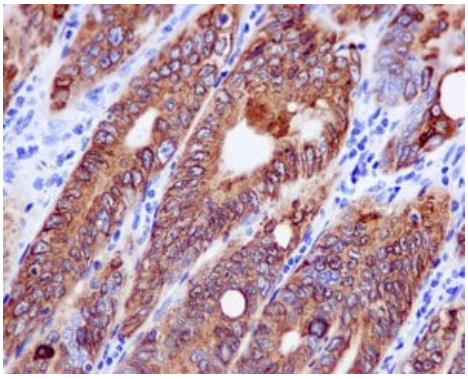
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 69 kDa
Observed band size: 72 kDa

Exposure time

Lane 1: 3.25 seconds
Lane 2 and 3: 180 seconds

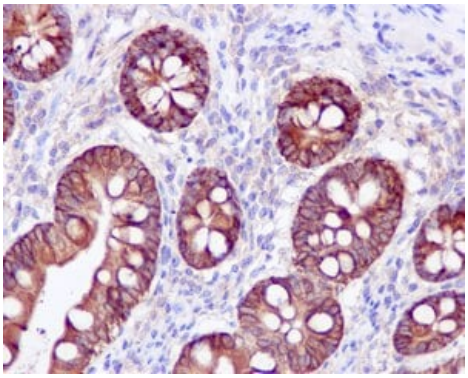
The expression profile observed in HCT 116 and MCF7 are consistent with the literatures (PMID: 14739610, PMID: 24325753, PMID: 16997132).
Negative control: HCT 116 (PMID: 14739610) and MCF7 (PMID: 24325753, PMID: 16997132)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colonic carcinoma tissue labelling COX2 / Cyclooxygenase 2 with unpurified ab179800 at a dilution of 1/250.

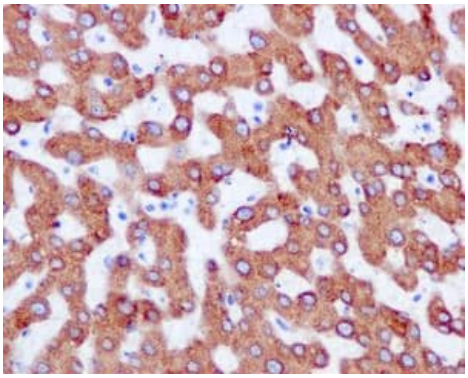
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded) analysis of human colon tissue labeling COX2 / Cyclooxygenase 2 with unpurified ab179800 at a dilution of 1/250.

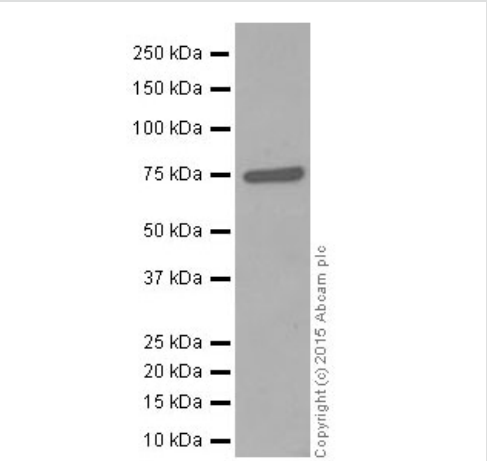
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded) analysis of human liver tissue labelling COX2 / Cyclooxygenase 2 with unpurified ab179800 at a dilution of 1/250.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Western blot - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

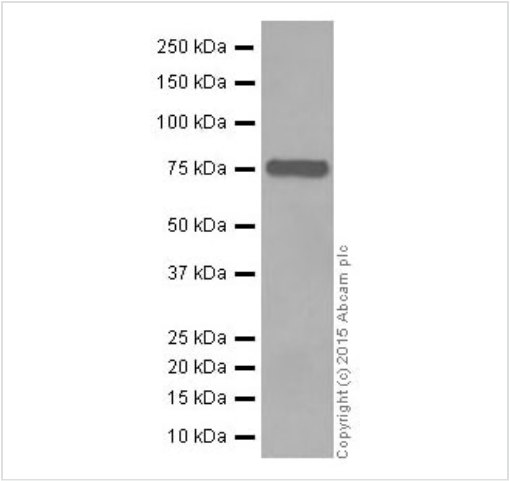
Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800) at 1/5000 dilution (purified) + Mouse spleen tissue lysate at 20 µg

Secondary

HRP-conjugated anti-rabbit IgG, specific to the non-reduced form of IgG at 1/50000 dilution

Predicted band size: 69 kDa
Observed band size: 72 kDa

Blocking and dilution buffer: 5% NFDM/TBST.



Western blot - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800) at 1/5000 dilution (purified) + A549 whole cell lysate at 20 µg

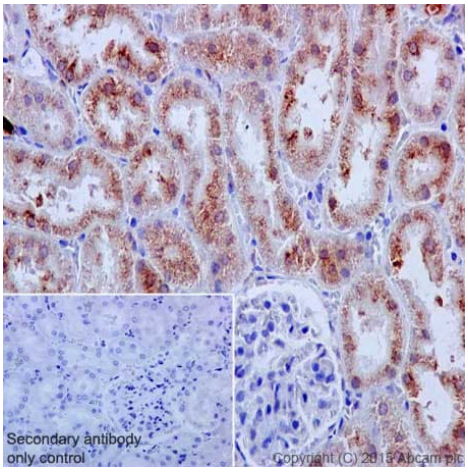
Secondary

HRP-conjugated anti-rabbit IgG, specific to the non-reduced form of IgG at 1/50000 dilution

Predicted band size: 69 kDa

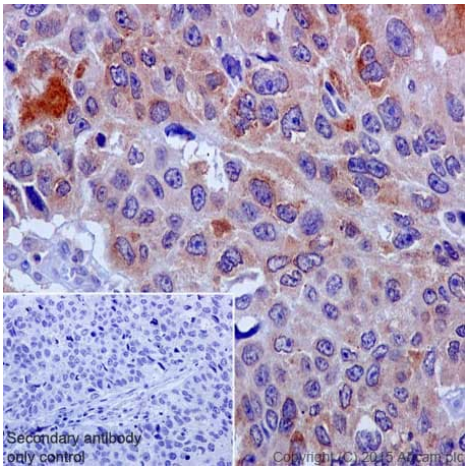
Observed band size: 72 kDa

Blocking and dilution buffer: 5% NFDM/TBST.



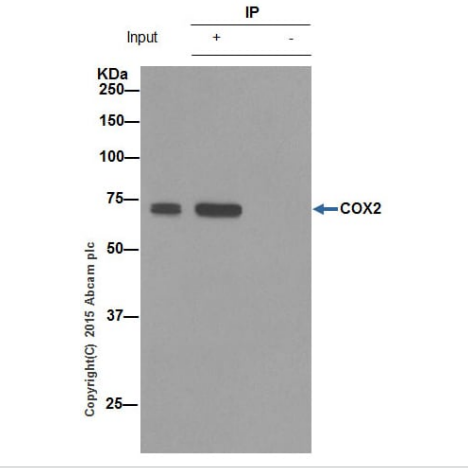
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat kidney tissue labelling COX2 / Cyclooxygenase 2 with purified ab179800 at 1/100. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human lung carcinoma tissue labelling COX2 / Cyclooxygenase 2 with purified ab179800 at 1/100. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Immunoprecipitation - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

ab179800 (purified) at 1/30 immunoprecipitating COX2 in A549 whole cell lysate.

Lane 1 (input): A549 whole cell lysate (10µg)

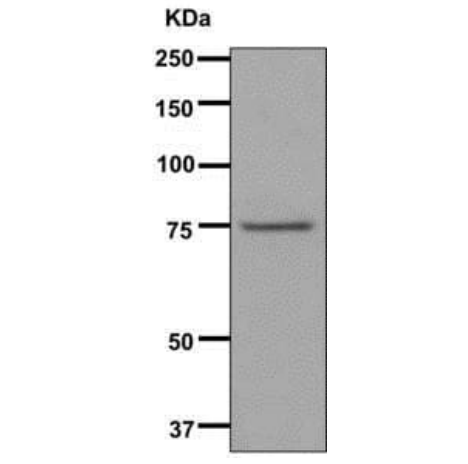
Lane 2 (+): ab179800 + A549 whole cell lysate.

Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab179800 in A549 whole cell lysate.

For western blotting, HRP-conjugated anti-rabbit IgG, specific for the reduced form of IgG, was used as the secondary antibody (1/1500).

Blocking buffer and concentration: 5% NFDM/TBST.

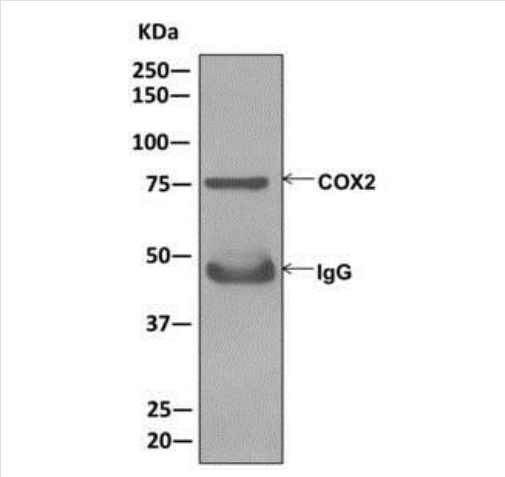
Diluting buffer and concentration: 5% NFDM /TBST.



Western blot - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

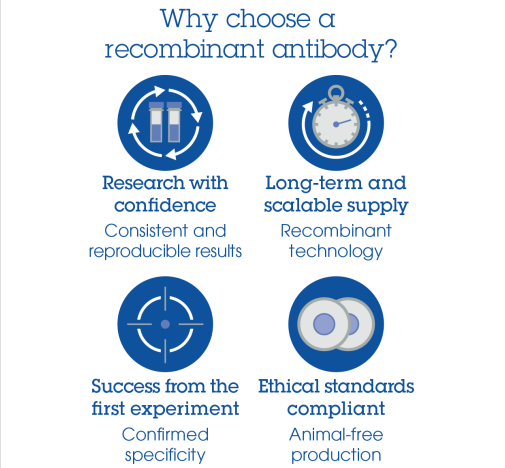
Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800) at 1/1000 dilution (unpurified) + A549 cell lysate at 10 µg

Predicted band size: 69 kDa



Immunoprecipitation - Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

Western blot analysis on immunoprecipitation pellet from A549 cell lysate using unpurified ab179800.



Anti-COX2 / Cyclooxygenase 2 antibody [EPR12012] (ab179800)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.co.jp/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors