abcam

Product datasheet

Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] ab62331

KO VALIDATED Recombinant RabMAb

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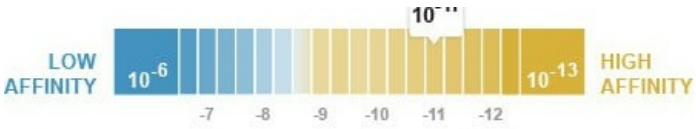
Overview

Product name	Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y]
Description	Rabbit monoclonal [EP1978Y] to COX2 / Cyclooxygenase 2
Host species	Rabbit
Tested applications	**Suitable for:** WB **Unsuitable for:** Flow Cyt or ICC/IF
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. (Peptide available as **ab213704**)
Positive control	WB: Raw264.7 cell lysate + LPS.
General notes	Abcam recommends **ab179800** for use in ICC/IF. 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**. Rat: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

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. Avoid freeze / thaw cycle.
Dissociation constant (K_D)	K_D = 1.01 x 10^{-11} M



Learn more about K_D

Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP1978Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab62331 in the following tested applications.

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

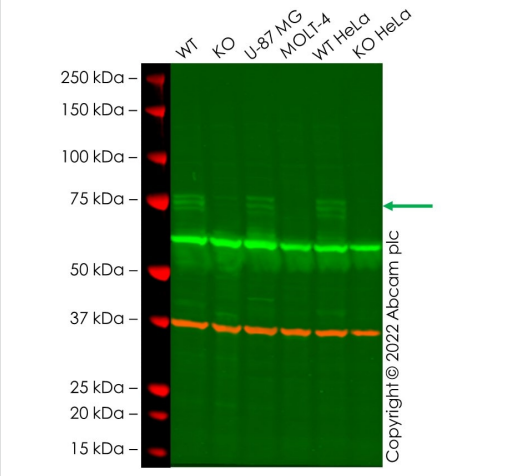
Application	Abreviews	Notes
WB	★★★★☆ (7)	1/500 - 1/1000. Detects a band of approximately 72 kDa (predicted molecular weight: 69 kDa).Can be blocked with **COX2 / Cyclooxygenase 2 peptide (ab213704)**.

Application notes Is unsuitable for Flow Cyt or ICC/IF.

Target

Function	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.
Pathway	Lipid metabolism; prostaglandin biosynthesis.
Sequence similarities	Belongs to the prostaglandin G/H synthase family. Contains 1 EGF-like domain.
Post-translational modifications	S-nitrosylation by NOS2 (iNOS) activates enzme activity. S-nitrosylation may take place on different Cys residues in addition to Cys-561.
Cellular localization	Microsome membrane. Endoplasmic reticulum membrane.

Images



Western blot - Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] (ab62331)

All lanes : Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] (ab62331) at 1/500 dilution

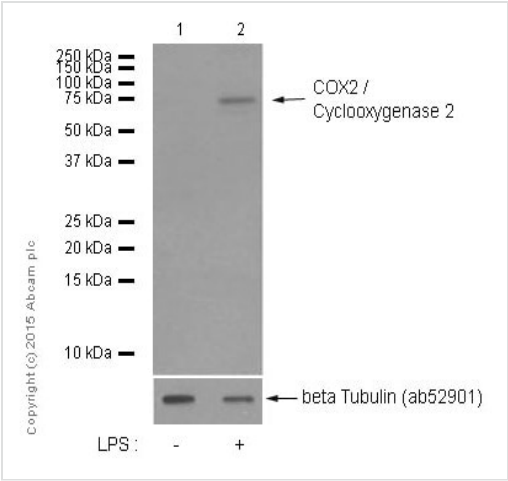
Lane 1 : Wild-type A549 cell lysate
Lane 2 : PTGS2 knockout A549 cell lysate
Lane 3 : U-87 MG cell lysate
Lane 4 : MOLT-4 cell lysate
Lane 5 : Wild-type Hela **ab255929** cell lysate
Lane 6 : PTGS2 knockout HeLa **ab255524** cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 69 kDa
Observed band size: 75 kDa

False colour image of Western blot: Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] staining at 1/500 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (**ab8245**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab62331 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**). The band at 65 kDa is a unknown protein as a result of non-specific binding of the antibody. 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 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 [EP1978Y] (ab62331)

All lanes : Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] (ab62331) at 1/1000 dilution (purified)

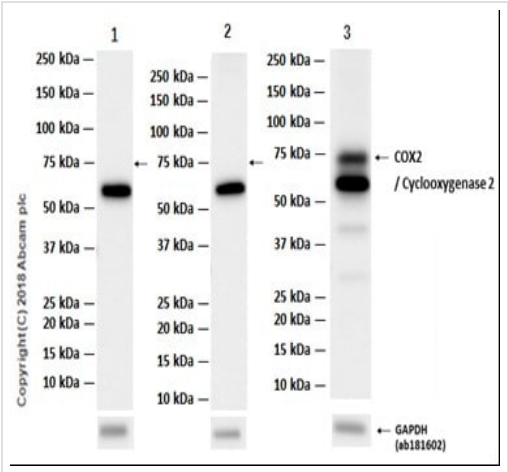
Lane 1 : Untreated Raw 264.7 cell lysate
Lane 2 : Raw 264.7 treated with LPS

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP-conjugated goat anti-rabbit IgG (H+L) 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 [EP1978Y] (ab62331)

All lanes : Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] (ab62331) at 1/1000 dilution (Purified)

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

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/200000 dilution

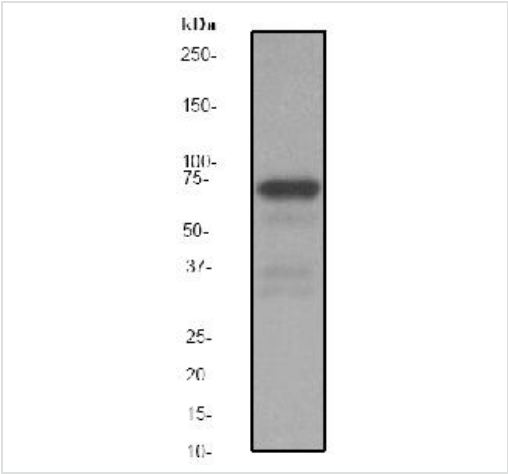
Predicted band size: 69 kDa
Observed band size: 72 kDa

Blocking and dilution buffer: 5% NFDM/TBST.

Exposure times

Lane 1 and 2: 5.5 seconds
Lane 3: 3.25 seconds

We are unsure as to the
identity of the extra band in HCT 116 and MCF7.
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)



Western blot - Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] (ab62331)

Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] (ab62331) at 1/500 dilution (unpurified) + Raw264.7 cell lysate (10ug) + LPS

Secondary
Goat anti-Rabbit HRP conjugated at 1/2000 dilution

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

Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] (ab62331)

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