

Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] - BSA and Azide free ab221924

KO VALIDATED

Recombinant

RabMAb

[8 References](#) [5 Images](#)

Overview

Product name	Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] - BSA and Azide free
Description	Rabbit monoclonal [EP1978Y] to COX2 / Cyclooxygenase 2 - BSA and Azide free
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	Raw264.7 cell lysate + LPS. Flow Cyt: HeLa cells
General notes	ab221924 is the carrier-free version of ab62331 .

Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.

This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

This product is compatible with the Maxpar[®] Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar[®] is a trademark of Fluidigm Canada Inc.

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](#).

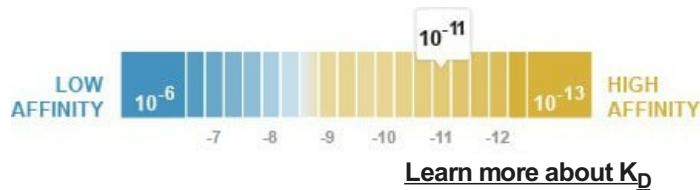
Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit

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. Do Not Freeze.
Dissociation constant (K _D)	K _D = 1.01 x 10 ⁻¹¹ M



Storage buffer	pH: 7.20 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP1978Y
Isotype	IgG

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab221924 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		Use at an assay dependent concentration. 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	S-nitrosylation by NOS2 (iNOS) activates enzyme activity. S-nitrosylation may take place on

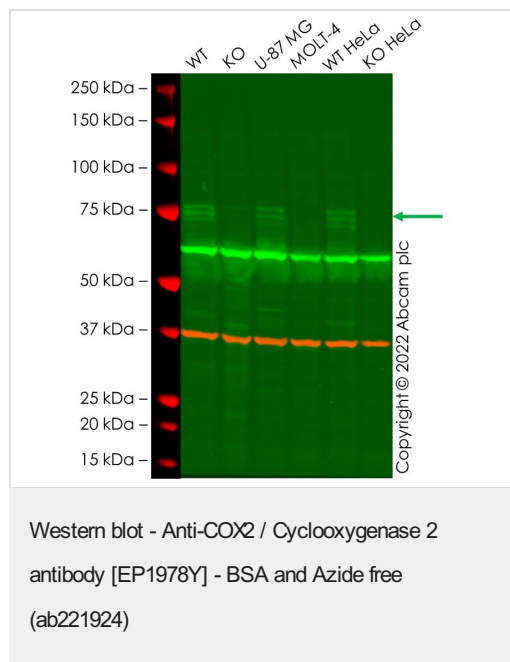
modifications

different Cys residues in addition to Cys-561.

Cellular localization

Microsome membrane. Endoplasmic reticulum membrane.

Images



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

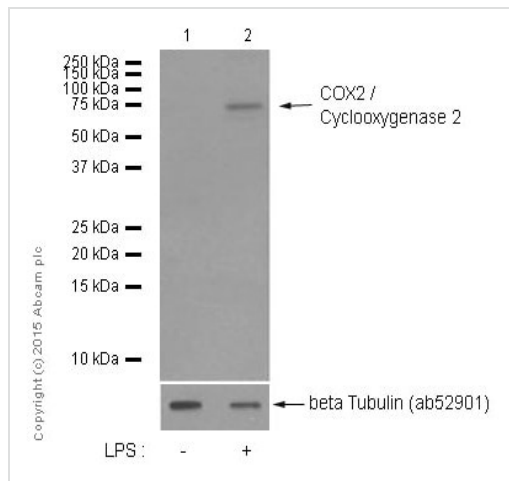
Lysates/proteins at 20 µg per lane.

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] - BSA and Azide free (ab221924)

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

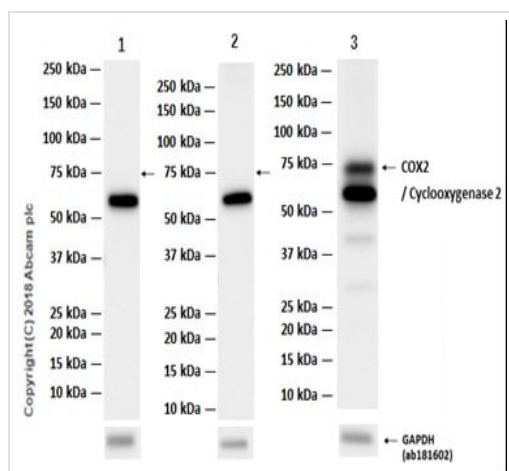
All lanes : HRP-conjugated goat anti-rabbit IgG (H+L) at 1/50000 dilution

Predicted band size: 69 kDa

Observed band size: 72 kDa

This data was developed using [ab62331](#), the same antibody clone in a different buffer formulation.

Blocking and dilution buffer: 5% NFDN/TBST.



Western blot - Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] - BSA and Azide free (ab221924)

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

This data was developed using [ab62331](#), the same antibody clone

in a different buffer formulation.

Blocking and dilution buffer: 5% NFDM/TBST. **Exposure times:**

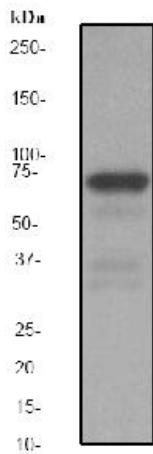
Lanes 1-2: 5.5 seconds

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, 24325753, 16997132).

Negative control: HCT 116 (PMID: 14739610) and MCF7 (PMID: 24325753, 16997132).



Western blot - Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y] - BSA and Azide free (ab221924)

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

This data was developed using **ab62331**, the same antibody clone in a different buffer formulation.

Why choose a recombinant antibody?



Anti-COX2 / Cyclooxygenase 2 antibody [EP1978Y]
- BSA and Azide free (ab221924)

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

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