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antibody and ELISA experts

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Anti-COX2/Cyclooxygenase 2/PTGS2 Picoband® Antibody

Catalog Number: A00084-2

About PTGS2

Prostaglandin-endoperoxide synthase 2, also known as cyclooxygenase-2 or COX-2, is an enzyme that in humans is encoded by the PTGS2 gene. It is mapped to 1q31.1. Prostaglandin-endoperoxide synthase (PTGS), also known as cyclooxygenase, is the key enzyme in prostaglandin biosynthesis, and acts both as a dioxygenase and as a peroxidase. There are two isozymes of PTGS: a constitutive PTGS1 and an inducible PTGS2, which differ in their regulation of expression and tissue distribution. This gene encodes the inducible isozyme. It is regulated by specific stimulatory events, suggesting that it is responsible for the prostanoid biosynthesis involved in inflammation and mitogenesis.

Overview

Product Name	Anti-COX2/Cyclooxygenase 2/PTGS2 Picoband® Antibody
Reactive Species	Human, Mouse
Description	Boster Bio Anti-COX2/Cyclooxygenase 2/PTGS2 Picoband® Antibody catalog # A00084-2. Tested in ELISA, Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4, 0.01 mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P35354

Technical Details

Immunogen	E.coli-derived human COX2/Cyclooxygenase 2/PTGS2 recombinant protein (Position: A18-L604).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.25ug/ml, Human, Mouse Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, -

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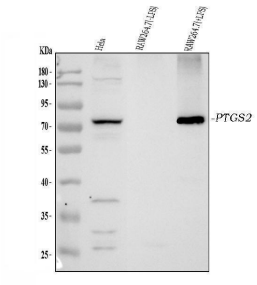
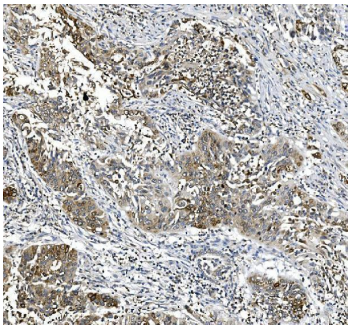
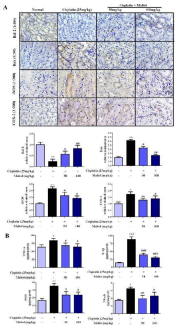
Anti-COX2/Cyclooxygenase 2/PTGS2 Picoband® Antibody (A00084-2) Images



Western blot analysis of PTGS2 using anti-PTGS2 antibody (A00084-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: mouse RAW264.7(-LPS) whole cell lysates, Lane 3: mouse RAW264.7(+LPS) whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PTGS2 antigen affinity purified polyclonal antibody (Catalog # A00084-2) at 0.25 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for PTGS2 at approximately 75 kDa. The expected band size for PTGS2 is at 69 kDa.



IHC analysis of PTGS2 using anti-PTGS2 antibody (A00084-2). PTGS2 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-PTGS2 Antibody (A00084-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



Effects of maltol on the levels of inflammation cytokines in cisplatin-induced renal toxicity. (A) Effects of maltol on the positive expressions of Bax, Bcl-2, iNOS and COX-2 in renal tissues were examined by IHC in renal tissues (magnification × 200), And the column chart shows stained area, semiquantitative analysis of Bax, Bcl-2, iNOS and COX-2 expression in kidneys to IHC. (B) Inflammation cytokines level of TNF-alpha, IL-1beta, iNOS and NF-kappaB in serum of mice were measured by ELISA kits. All values were expressed as mean ± S.D. * p

Antioxidant and anti-inflammatory effects of OVE in LPS-stimulated RAW264.7 cells. (A, B) Cell viability measured by CCK8 assay. (C) Analysis of ROS levels detected by DCFH-DA probe. (D) Quantitative analysis of gene expression levels of iNos, Il6, Il-1b, Tnfalpha, and Cox-2 by qRT-PCR. (E) NO production analysis by NO assay. (F) ELISA results of IL6, IL-1beta, and TNFalpha. (G) Protein expression levels of

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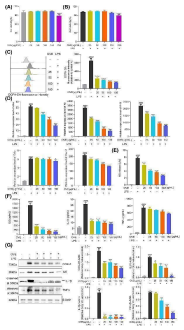
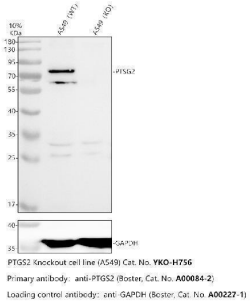
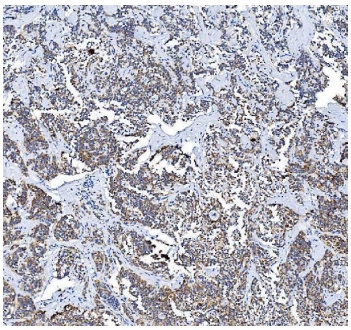


COX-2, IL6, IL-1beta, and TNFalpha. All experiments were carried out in triplicates and data are presented as means ± SDs; one-way ANOVA analysis was adopted for multiple comparisons; ####P<0.0001, compared to the untreated control group; *P<0.05, **P<0.01, ***P<0.001, and ****P<0.0001, compared to the LPS control group. Index in PubMed under a CC BY license. PMID: 39455284



Western blot analysis of COX2/Cyclooxygenase 2/PTGS2 using anti-COX2/Cyclooxygenase 2/PTGS2 antibody (A00084-2). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human A549-WT whole cell lysates, Lane 2: human A549-PTGS2 KO whole cell lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-COX2/Cyclooxygenase 2/PTGS2 antigen affinity purified polyclonal antibody (A00084-2) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for COX2/Cyclooxygenase 2/PTGS2 at approximately 75 kDa. The expected band size for COX2/Cyclooxygenase 2/PTGS2 is at 69 kDa.



IHC analysis of PTGS2 using anti-PTGS2 antibody (A00084-2). PTGS2 was detected in a paraffin-embedded section of human pancreatic cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-PTGS2 Antibody (A00084-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

Flow Cytometry analysis of CACO-2 cells using anti-PTGS2 antibody (A00084-2). Overlay histogram showing CACO-2 cells stained with A00084-2 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-PTGS2 Antibody (A00084-2, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127,

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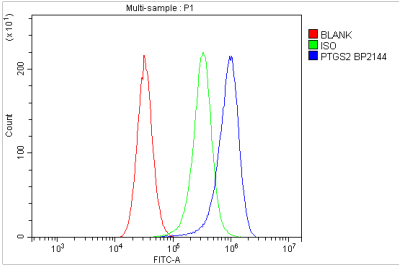
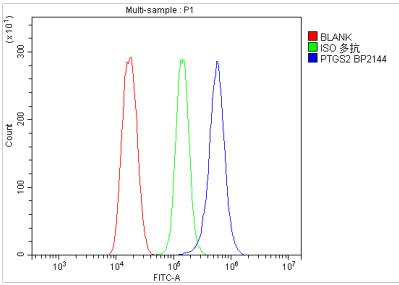


5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



Flow Cytometry analysis of HEPA1-6 cells using anti-PTGS2 antibody (A00084-2). Overlay histogram showing HEPA1-6 cells stained with A00084-2 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-PTGS2 Antibody (A00084-2, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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Anti-COX2/Cyclooxygenase 2/PTGS2 Antibody

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