

Anti-PTGER2 Antibody [JE30-72]

HA721380



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, FC, IF-Cell
Molecular Wt:	Predicted band size: 40 kDa
Clone number:	JE30-72

Description: EP2 is widely distributed in humans. Its protein is expressed in human small intestine, lung, media of arteries and arterioles of the kidney, thymus, uterus, brain cerebral cortex, brain striatum, brain hippocampus, corneal epithelium, corneal choriocapillaries, Myometrium cells, eosinophiles, sclera of the eye, articular cartilage, the corpus cavernosum of the penis, and airway smooth muscle cells; its mRNA is expressed in gingival fibroblasts, monocyte-derived dendritic cells, aorta, corpus cavernosum of the penis, articular cartilage, airway smooth muscle, and airway epithelial cells. In rats, the receptor protein and/or mRNA has been found in lung, spleen, intestine, skin, kidney, liver, long bones, and rather extensively throughout the brain and other parts of the central nervous system. EP2 expression in fibroblasts from the lungs of mice with bleomycin-induced pulmonary fibrosis and humans with Idiopathic pulmonary fibrosis is greatly reduced. In both instances, this reduced expression was associated with hypermethylation of CpG dinucleotide sites located in the first 420 base pairs upstream of the PTGER2 gene transcription start site of these fibroblasts. This suggests that EP2 expression is regulated by this methylation.

Immunogen: Synthetic peptide within Human PTGER2 aa 300-358 / 358.

Positive control: JAR cell lysate, NIH/3T3 cell lysate, human placenta tissue lysate, mouse placenta tissue lysate, mouse lung tissue lysate, rat lung tissue lysate, HeLa cell lysate, A549 cell lysate, THP-1 cell lysate, human placenta tissue, human lung tissue, JAR.

Subcellular location: Cell membrane.

Database links: SwissProt: P43116 Human | Q62053 Mouse | Q62928 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:200-1:1,000
FC	1:500-1:1,000
IF-Cell	1:100

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Protein A affinity purified.

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Images

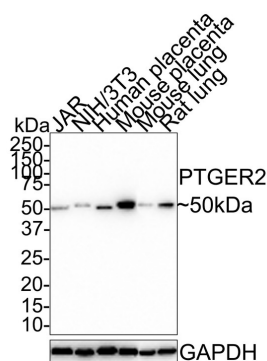


Fig1: Western blot analysis of PTGER2 on different lysates with Rabbit anti-PTGER2 antibody (HA721380) at 1/1,000 dilution.

Lane 1: JAR cell lysate (15 μ g/Lane)
 Lane 2: NIH/3T3 cell lysate (15 μ g/Lane)
 Lane 3: Human placenta tissue lysate (30 μ g/Lane)
 Lane 4: Mouse placenta tissue lysate (30 μ g/Lane)
 Lane 5: Mouse lung tissue lysate (30 μ g/Lane)
 Lane 6: Rat lung tissue lysate (30 μ g/Lane)

Predicted band size: 40 kDa
 Observed band size: 50 kDa

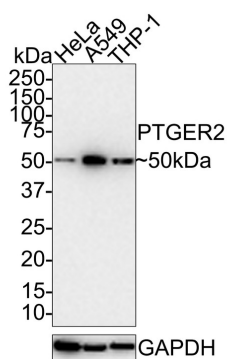
Exposure time: 10 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDN/TBST for 1 hour at room temperature. The primary antibody (HA721380) at 1/1,000 dilution was used in 5% NFDN/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:100,000 dilution was used for 1 hour at room temperature.

Fig2: Western blot analysis of PTGER2 on different lysates with Rabbit anti-PTGER2 antibody (HA721380) at 1/1,000 dilution.

Lane 1: HeLa cell lysate
 Lane 2: A549 cell lysate
 Lane 3: THP-1 cell lysate



Lysates/proteins at 15 μ g/Lane.

Predicted band size: 40 kDa
 Observed band size: 50 kDa

Exposure time: 3 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDN/TBST for 1 hour at room temperature. The primary antibody (HA721380) at 1/1,000 dilution was used in 5% NFDN/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:100,000 dilution was used for 1 hour at room temperature.

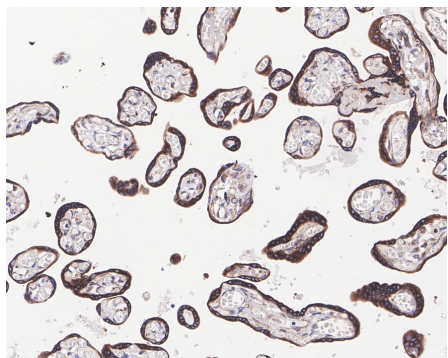


Fig3: Immunohistochemical analysis of paraffin-embedded human placenta tissue with Rabbit anti-PTGER2 antibody (HA721380) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA721380) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

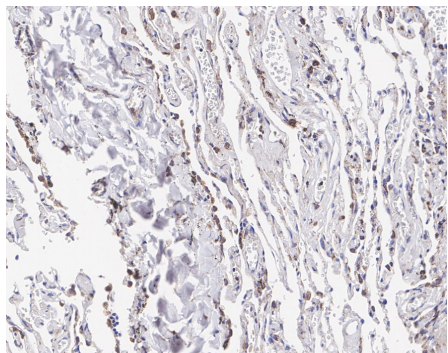
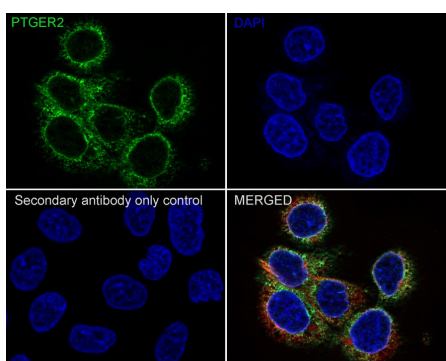


Fig4: Immunohistochemical analysis of paraffin-embedded human lung tissue with Rabbit anti-PTGER2 antibody (HA721380) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA721380) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Fig5: Immunocytochemistry analysis of JAR cells labeling PTGER2 with Rabbit anti-PTGER2 antibody (HA721380) at 1/100 dilution.



Cells were fixed in 4% paraformaldehyde for 10 minutes at 37 °C, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Rabbit anti-PTGER2 antibody (HA721380) at 1/100 dilution in 2% negative goat serum overnight at 4 °C. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/200 dilution overnight at +4 °C. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

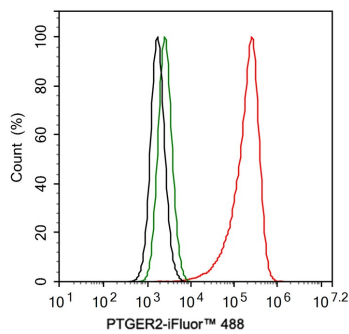


Fig6: Flow cytometric analysis of JAR cells labeling PTGER2.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA721380, 1ug/ml) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4°C for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4°C. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are “FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE”.

Background References

1. Du N et al. Identification of ACOT13 and PTGER2 as novel candidate genes of autosomal dominant polycystic kidney disease through whole exome sequencing. *Eur J Med Res.* 2021 Dec
2. Liu B et al. Proliferation of bovine endometrial epithelial cells is promoted by prostaglandin E2-PTGER2 signaling through cell cycle regulation. *Prostaglandins Leukot Essent Fatty Acids.* 2021 Nov

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