abcam

ab167171

Anti-Prostaglandin E Receptor EP2/PTGER2 antibody [EPR8030(B)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR8030(B)
Purification technique	Affinity purification Protein A
Concentration	0.88 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	-

Species	Rat
Dilution info	1/1000 - 1/10000
Notes	-

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Species	Cow
Dilution info	1/1000 - 1/10000
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat, Cow
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Rat
Dilution info	1/250 - 1/500
Notes	-

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Expected

Species	Mouse, Cow
Dilution info	Use at an assay dependent concentration.

Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/80 - 1/500
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse, Rat, Cow
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Prostaglandin E2 receptor EP2 subtype

Function	Receptor for prostaglandin E2 (PGE2). The activity of this receptor is mediated by G(s) proteins that stimulate adenylate cyclase. The subsequent raise in intracellular cAMP is responsible for the relaxing effect of this receptor on smooth muscle.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Prostaglandin E Receptor EP2 also known as PTGER2 or EP2 receptor is a G-protein coupled receptor with a molecular mass of approximately 53 kDa. This receptor primarily binds prostaglandin E2 (PGE2) mediating various cellular responses. EP2 receptor is expressed in tissues such as the brain kidneys lungs and immune cells. Its activation leads to the stimulation of adenylyl cyclase increasing levels of cyclic AMP (cAMP) within the cell.
Biological function summary	The EP2 receptor plays a role in vasodilation immune modulation and regulation of pain and inflammation. It does not act as part of a large protein complex but rather exerts its effects individually through its coupling with G-proteins. EP2 receptor stimulation results in smooth muscle relaxation and has implications in neuroinflammation and renal function.
Pathways	The EP2 receptor is involved in the prostaglandin signaling pathway and contributes to the inflammatory response pathway. It shares a connection with other receptors such as EP1 EP3 and EP4 which also bind PGE2 but induce different cellular responses. These pathways integrate signals that modulate processes like inflammation and immune responses highlighting EP2's role in maintaining physiological balance.
Associated diseases and disorders	EP2 receptor activity is associated with conditions like asthma and Alzheimer's disease. In asthma the receptor's activity may influence airway hyperresponsiveness through its effects on smooth muscle and immune cells. In Alzheimer's EP2 receptor-related pathways may contribute to neuroinflammation which is linked with disease progression. Connections with proteins like COX-2 can be noted in these disorders as COX-2-dependent prostaglandin synthesis directly affects EP2 receptor signaling and subsequent cellular outcomes.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

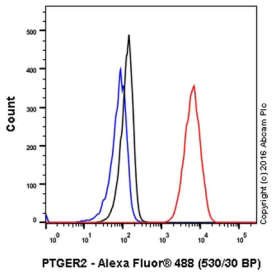
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

6 product images

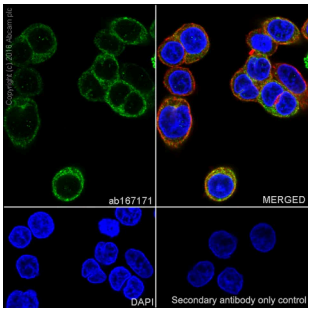


Flow Cytometry (Intracellular) - Anti-Prostaglandin E Receptor EP2/PTGER2 antibody [EPR8030(B)] (ab167171)

Prostaglandin E Receptor EP2/PTGER2 Flow Cytometry (Intracellular) staining using rabbit Anti-Prostaglandin E Receptor EP2/PTGER2 antibody

ab167171 staining Prostaglandin E Receptor EP2/PTGER2 in theWI-38 (Human Fetal Lung Fibroblast) cell lineby intracellular flow cytometry. Cells were fixed with 4% paraformaldehyde and the sample was incubated with the primary antibody at a dilution of 1/80. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/2000was used as the secondary antibody.
Isoytype control: Rabbit monoclonal IgG (Black)

Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue)

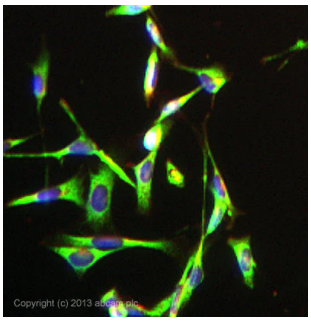


Immunocytochemistry/ Immunofluorescence - Anti-Prostaglandin E Receptor EP2/PTGER2 antibody [EPR8030(B)] (ab167171)

Prostaglandin E Receptor EP2/PTGER2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Prostaglandin E Receptor EP2/PTGER2 antibody

ab167171 staining Prostaglandin E Receptor EP2/PTGER2 in WI-38 (Human Fetal Lung Fibroblast) cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% Paraformaldehyde and permeabilized with 0.1% Triton X-100. Samples were incubated with primary antibody at a dilution of 1/250. A goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) was

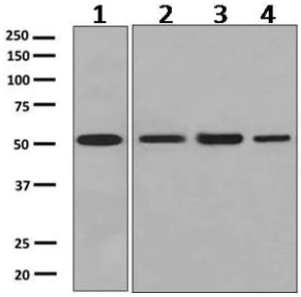
used as the secondary antibody at 1/1000. ab7291 and ab150120 were used as counterstains for primary antibody ab167171 and secondary antibody ab150077 respectively and DAPI was used as a nuclear counterstain.
Negative control 1: Rabbit primary antibody and anti-mouse secondary antibody (ab150120)
Negative control 2: Mouse primary antibody (ab7291) and anti-rabbit secondary antibody (ab150077)



Immunocytochemistry/ Immunofluorescence - Anti-Prostaglandin E Receptor EP2/PTGER2 antibody [EPR8030(B)] (ab167171)

Prostaglandin E Receptor EP2/PTGER2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Prostaglandin E Receptor EP2/PTGER2 antibody

ab167171 stained SV40LT-SMC (rat) cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab167171 at 1/200 dilution overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti- rabbit (ab96899) IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Western blot - Anti-Prostaglandin E Receptor EP2/PTGER2 antibody [EPR8030(B)] (ab167171)

All lanes:
Western blot - Anti-Prostaglandin E Receptor EP2/PTGER2 antibody [EPR8030(B)] (ab167171) at 1/1000 dilution

Lane 1:
Human placenta lysates at 10 µg

Lane 2:
Human fetal lung lysates at 10 µg

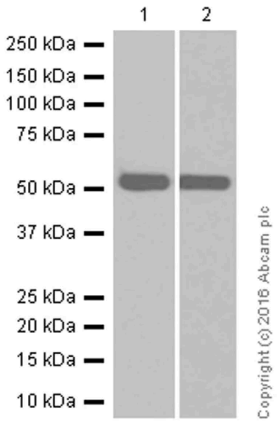
Lane 3:
JAR cell lysates at 10 µg

Lane 4:
WI38 cell lysates at 10 µg

Secondary

All lanes:
HRP labeled goat anti-rabbit at 1/2000 dilution

Predicted band size: 40 kDa



Western blot - Anti-Prostaglandin E Receptor EP2/PTGER2 antibody [EPR8030(B)] (ab167171)

Blocking and diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Prostaglandin E Receptor EP2/PTGER2 antibody [EPR8030(B)] (ab167171) at 1/1000 dilution

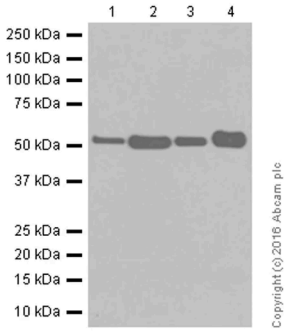
Lane 1:
Mouse kidney tissue lysate at 20 µg

Lane 2:
WI-38 (human lung) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 40 kDa



Western blot - Anti-Prostaglandin E Receptor EP2/PTGER2 antibody [EPR8030(B)] (ab167171)

Prostaglandin E Receptor EP2/PTGER2 Western blot staining using rabbit Anti-Prostaglandin E Receptor EP2/PTGER2 antibody

Blocking and diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Prostaglandin E Receptor EP2/PTGER2 antibody [EPR8030(B)] (ab167171) at 1/1000 dilution

Lane 1:
Mouse kidney tissue lysate at 20 µg

Lane 2:
Mouse spleen tissue lysate at 20 µg

Lane 3:
Rat spleen tissue lysate at 20 µg

Lane 4:
MDBK (cow kidney) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 40 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.