abcam

ab199779

Alexa Fluor® 488 Anti-PBR antibody [EPR5384]

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR5384
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human

Dilution info	1/100 - 1/500
Notes	This product gave a positive signal in HeLa cells fixed with 4% formaldehyde (10 min) and 100% methanol (5 min).

Expected

Species	Mouse
Dilution info	1/100 - 1/500
Notes	This product gave a positive signal in HeLa cells fixed with 4% formaldehyde (10 min) and 100% methanol (5 min).

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Species	Mouse
Dilution info	1/500
Notes	-

IHC-P

Expected

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

Target data

See full target information TSPO

Function	Can bind protoporphyrin IX and may play a role in the transport of porphyrins and heme (By similarity). Promotes the transport of cholesterol across mitochondrial membranes and may play a role in lipid metabolism (PubMed:24814875), but its precise physiological role is controversial. It is apparently not required for steroid

hormone biosynthesis. Was initially identified as peripheral-type benzodiazepine receptor; can also bind isoquinoline carboxamides (PubMed:1847678).

Storage

Shipped at conditions	Blue Ice
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, Store in the dark

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.

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Supplementary info

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

Activity summary	PBR also known as the Peripheral Benzodiazepine Receptor is a protein predominantly found in the outer mitochondrial membrane. It has alternate names like Translocator Protein (TSPO) and the mass of this protein is approximately 18 kDa. PBR is expressed in various tissues but shows high levels in steroidogenic tissues like adrenal glands as well as in the brain heart liver and kidneys. The abundant presence in these tissues highlights its importance in a variety of physiological functions.
Biological function summary	PBR interacts with cholesterol for the synthesis of steroid hormones making it important for steroidogenesis. PBR is a part of the Mitochondrial Permeability Transition Pore complex (MPTP) involved in regulating the transport of molecules across the mitochondrial membrane. Through its association with the MPTP PBR plays a significant role in mitochondrial functions such as apoptosis and energy metabolism. The interaction with other molecules also includes the binding with benzodiazepines impacting processes like immune response and cell proliferation.
Pathways	PBR plays a role in the steroid biosynthesis and apoptosis pathways. It interfaces with the StAR (Steroidogenic Acute Regulatory) protein to facilitate cholesterol transport into mitochondria the initial step in steroid hormone production. PBR is also involved in pathways that regulate apoptosis and mitochondrial function linking it to different cellular processes through interactions with proteins like VDAC (Voltage-Dependent Anion Channel).
Associated diseases and disorders	PBR has relevance to conditions such as neurodegenerative diseases and cancer. PBR expression changes in disorders like Alzheimer's disease where it might reflect mitochondrial dysfunctions. It has also been associated with certain cancers where aberrant PBR activity might contribute to altered cell proliferation and apoptosis. Proteins like caspases are involved in the apoptotic pathways connected with PBR highlighting its involvement in disease processes.

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

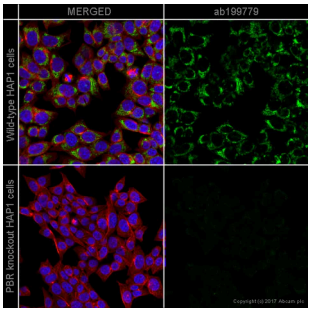
We do not recommend this combination. It is not covered by our product promise.

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.

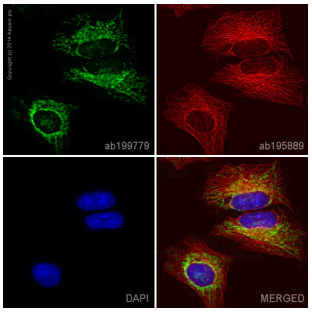
3 product images



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-PBR antibody [EPR5384] (ab199779)

PBR Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PBR antibody

ab199779 staining PBR in wild-type HAP1 cells (top panel) and PBR knockout HAP1 cells (bottom panel). The cells were fixed with 100% methanol (5min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab199779 at a 1/500 dilution (shown in green) and ab195889, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at a 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

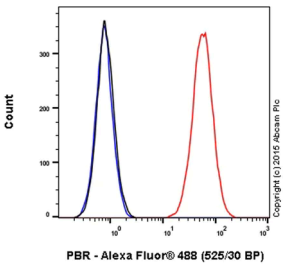


Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-PBR antibody [EPR5384] (ab199779)

PBR Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PBR antibody

ab199779 staining PBR in HeLa cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab at a 1/100 dilution (shown in green) and ab195889, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at a 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

This product also gave a positive signal under the same testing conditions in HeLa cells fixed with 4% formaldehyde (10 min).



Flow Cytometry (Intracellular) - Alexa Fluor® 488 Anti-PBR antibody [EPR5384] (ab199779)

PBR Flow Cytometry (Intracellular) staining using rabbit Anti-PBR antibody

Overlay histogram showing HeLa cells stained with ab199779 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-

protein interactions followed by the antibody (ab199779, 1/500 dilution) for 30 min at 22°C. Isotype control antibody (black line) was rabbit monoclonal IgG [EPR25A] Alexa Fluor® 488 (ab199091) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in HeLa cells fixed with 4% formaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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