abcam

ab180953

Anti-PAR2 antibody [EPR13675]

Anti-PAR2 antibody [EPR13675] (ab180953) is a rabbit monoclonal antibody detecting PAR2 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 20 publications

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 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	EPR13675
Purification technique	Affinity purification Protein A
Concentration	0.147 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	Human
Dilution info	1/1000 - 1/10000
Notes	-

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information F2RL1

Function

Receptor for trypsin and trypsin-like enzymes coupled to G proteins (PubMed:28445455). Its function is mediated through the activation of several signaling pathways including phospholipase C (PLC), intracellular calcium, mitogen-activated protein kinase (MAPK), I-kappaB kinase/NF-kappaB and Rho (PubMed:28445455). Can also be transactivated by cleaved F2R/PAR1. Involved in modulation of inflammatory responses and regulation of innate and adaptive immunity, and acts as a sensor for proteolytic enzymes generated during infection. Generally is promoting inflammation. Can signal synergistically with TLR4 and probably TLR2 in inflammatory responses and modulates TLR3 signaling. Has a protective role in establishing the endothelial barrier; the activity involves coagulation factor X. Regulates endothelial cell barrier integrity during neutrophil extravasation, probably following proteolytic cleavage by PRTN3 (PubMed:23202369). Proposed to have a bronchoprotective role in airway epithelium, but also shown to compromise the airway epithelial barrier by interrupting E-cadherin adhesion (PubMed:10086357). Involved in the regulation

of vascular tone; activation results in hypotension presumably mediated by vasodilation. Associates with a subset of G proteins alpha subunits such as GNAQ, GNA11, GNA14, GNA12 and GNA13, but probably not with G(o)-alpha, G(i) subunit alpha-1 and G(i) subunit alpha-2. However, according to PubMed:21627585 can signal through G(i) subunit alpha. Believed to be a class B receptor which internalizes as a complex with arrestin and traffic with it to endosomal vesicles, presumably as desensitized receptor, for extended periods of time. Mediates inhibition of TNF stimulated JNK phosphorylation via coupling to GNAQ and GNA11; the function involves dissociation of RIPK1 and TRADD from TNFR1. Mediates phosphorylation of nuclear factor NF-kappa-B RELA subunit at 'Ser-536'; the function involves IKBKB and is predominantly independent of G proteins. Involved in cellular migration. Involved in cytoskeletal rearrangement and chemotaxis through beta-arrestin-promoted scaffolds; the function is independent of GNAQ and GNA11 and involves promotion of cofilin dephosphorylation and actin filament severing. Induces redistribution of COPS5 from the plasma membrane to the cytosol and activation of the JNK cascade is mediated by COPS5. Involved in the recruitment of leukocytes to the sites of inflammation and is the major PAR receptor capable of modulating eosinophil function such as pro-inflammatory cytokine secretion, superoxide production and degranulation. During inflammation promotes dendritic cell maturation, trafficking to the lymph nodes and subsequent T-cell activation. Involved in antimicrobial response of innate immune cells; activation enhances phagocytosis of Gram-positive and killing of Gram-negative bacteria. Acts synergistically with interferon-gamma in enhancing antiviral responses. Implicated in a number of acute and chronic inflammatory diseases such as of the joints, lungs, brain, gastrointestinal tract, periodontium, skin, and vascular systems, and in autoimmune disorders. Probably mediates activation of pro-inflammatory and pro-fibrotic responses in fibroblasts, triggered by coagulation factor Xa (F10) (By similarity). Mediates activation of barrier protective signaling responses in endothelial cells, triggered by coagulation factor Xa (F10) (PubMed:22409427).

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

What is this antibody validated in?
Anti-PAR2 antibody [EPR13675] (ab180953) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of PAR2?
Anti-PAR2 [EPR13675] (ab180953) specifically detects a band for PAR2 (UniProt: P55085) at a molecular weight of 44kDa.

Trusted by the scientific community
Anti-PAR2 [EPR13675] (ab180953) was first used in a scientific publication in 2014 and has been cited over 20 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EPR13675] also available for your convenience: ab180953, Alexa Fluor® 594 - ab208081, Carrier free - ab240232, PE - ab302984, APC - ab302985, HRP - ab302986, Alkaline Phosphatase - ab308797, Alexa Fluor® 488 - ab309741, Alexa Fluor® 647 - ab310107, Alexa Fluor® 555 - ab312043, Alexa Fluor® 568 - ab312521, Alexa Fluor® 750 - ab321240

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.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

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.

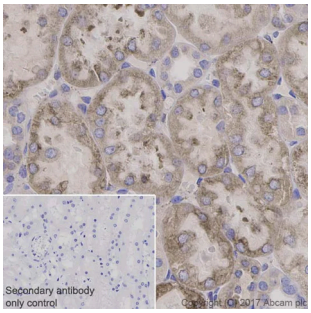
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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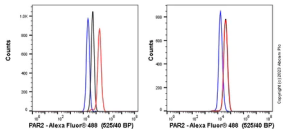
9 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAR2 antibody [EPR13675] (ab180953)

PAR2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PAR2 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue sections labeling PAR2 with Purified ab180953 at 1/100 dilution (1.38 µg/mL). Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Flow Cytometry (Intracellular) - Anti-PAR2 antibody [EPR13675] (ab180953)

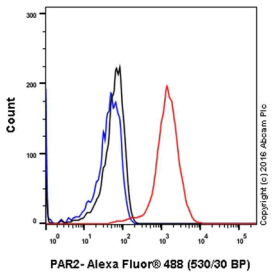
PAR2 Flow Cytometry (Intracellular) staining using rabbit Anti-PAR2 antibody

Flow cytometry overlay histogram showing left HT-29 positive cells and right negative Daudi stained with ab180953 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS containing 10µg/ml human IgG and 10% normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody (ab180953) (1x 106 in 100µl at 5.0µg/ml (1/560)) for 30min at 22°C.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min at 22°C

Isotype control antibody (black line) was Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

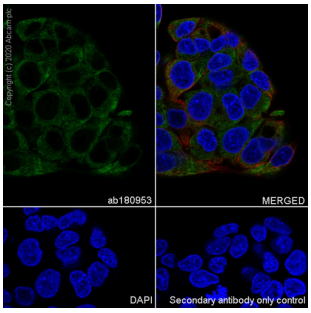
Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.



Flow Cytometry (Intracellular) - Anti-PAR2 antibody [EPR13675] (ab180953)

PAR2 Flow Cytometry (Intracellular) staining using rabbit Anti-PAR2 antibody

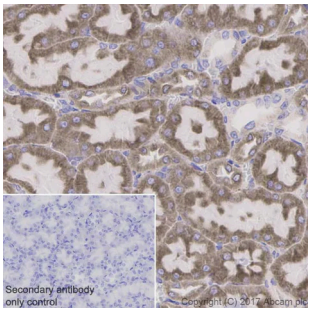
Intracellular Flow Cytometry analysis of MCF-7 (human breast carcinoma) cells labeling PAR2 with unpurified ab180953 at 1/20 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



Immunocytochemistry/ Immunofluorescence - Anti-PAR2 antibody [EPR13675] (ab180953)

PAR2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PAR2 antibody

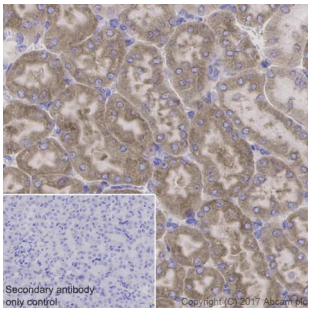
Immunocytochemistry analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling PAR2 with Purified ab180953 at 1/50 dilution (2.76 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 dilution (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 dilution (2 µg/mL). DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAR2 antibody [EPR13675] (ab180953)

PAR2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PAR2 antibody

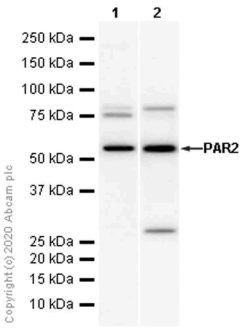
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat kidney tissue sections labeling PAR2 with Purified ab180953 at 1/100 dilution (1.38 µg/mL). Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAR2 antibody [EPR13675] (ab180953)

PAR2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PAR2 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue sections labeling PAR2 with Purified ab180953 at 1/100 dilution (1.38 µg/mL). Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-PAR2 antibody [EPR13675] (ab180953)

We are unsure how to define the extra bands.
All lanes:
Western blot - Anti-PAR2 antibody [EPR13675] (ab180953) at 1/1000 dilution

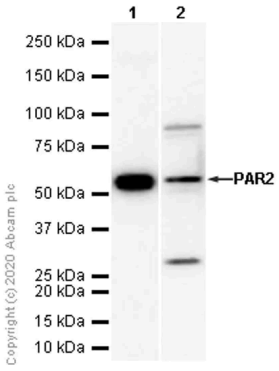
Lane 1:
Human kidney lysate at 15 µg

Lane 2:
Mouse kidney lysate at 15 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 44 kDa



Western blot - Anti-PAR2 antibody [EPR13675] (ab180953)

PAR2 Western blot staining using rabbit Anti-PAR2 antibody

We are unsure how to define the extra bands.
All lanes:
Western blot - Anti-PAR2 antibody [EPR13675] (ab180953) at 1/1000 dilution

Lane 1:
HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysate at 15 µg

Lane 2:
Rat kidney lysate at 15 µg

Secondary

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

Predicted band size: 44 kDa

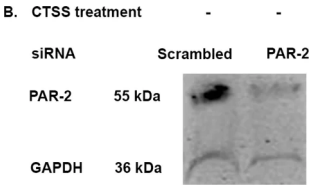


Image collected and cropped by CiteAb under a CC-BY license from the publication

Western blot - Anti-PAR2 antibody [EPR13675] (ab180953)

PAR2 western blot using anti-PAR2 antibody [EPR13675] ab180953. Publication image and figure legend from Klinngam, W., Fu, R., et al., 2018, Int J Mol Sci, PubMed 30423938.

ab180953 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab180953 please see the product overview.

PAR-2 gene and protein expression after 48 h of PAR-2 or scrambled siRNA transfection in human corneal epithelial cells. (A) PAR-2 gene expression in HCE-T cells transfected with PAR-2 or scrambled siRNA. PAR-2 gene expression was normalized to expression of the endogenous gene, GAPDH (n = 3 samples/group; (B) PAR-2 bands measured by Western Blot in lysates from human corneal epithelial cells transfected with PAR-2 or scrambled siRNA; (C) PAR-2 band intensity in human corneal epithelial cells transfected with PAR-2 or scrambled siRNA. The intensity signal of PAR-2 band was normalized to the band intensity of GAPDH and designated as 100% for scrambled

siRNA-treated cells (n = 5 samples/group); (D) PAR-2 protein expression in HCE-T cells transfected with PAR-2 or scrambled siRNA as determined by ELISA. PAR-2 protein expression was normalized to total protein in lysates (n = 3 samples in PAR-2 siRNA transfected and n = 2 in scrambled siRNA transfected, * $p \leq 0.05$, *** $p \leq 0.001$ data are represented as mean ± SEM, and a two-tailed, unpaired Student's t-test was used to compare PAR-2 siRNA transfected to scrambled siRNA transfected cells).

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