abcam

ab307292

Anti-IRF8 antibody [EPR26381-181]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 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	EPR26381-181
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

WB

Tested

Species	Rat
Dilution info	1/1000
Notes	-

Species	Mouse

Dilution info	1/1000
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Expected

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

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Expected

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

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Expected

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

Not recommended

Species	Human
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Rat
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Human
Dilution info	-
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 Irf8

Function Transcription factor that specifically binds to the upstream regulatory region of type I interferon (IFN) and IFN-inducible MHC class I genes (the interferon consensus sequence (ICS)) (PubMed:12393690, PubMed:2111015). Can both act as a transcriptional activator or repressor (PubMed:2111015). Plays a negative regulatory role in cells of the immune system (PubMed:2111015). Involved in CD8(+) dendritic cell differentiation by forming a complex with the BATF-JUNB heterodimer in immune cells, leading to recognition of AICE sequence (5'-TGAnTCA/GAAA-3'), an immune-specific regulatory element, followed by cooperative binding of BATF and IRF8 and activation of genes (PubMed:12393690, PubMed:22992524). Required for the development of plasmacytoid dendritic cells (pDCs), which produce most of the type I IFN in response to viral infection (PubMed:12393690, PubMed:12461077, PubMed:12538667, PubMed:23382217).

Positively regulates macroautophagy in dendritic cells (By similarity). Acts as a transcriptional repressor of osteoclast differentiation factors such as NFATC1 and EEIG1 (PubMed:32741026).

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	IRF8 also known as Interferon Regulatory Factor 8 plays a significant role as a transcription factor in the regulation of gene expression. With a molecular mass of approximately 48 kDa this nuclear protein primarily functions in immune cells such as monocytes dendritic cells and macrophages. It binds to specific DNA sequences in gene promoters influencing the transcription of genes involved in immune response and development of blood cells. The expression of IRF8 extends beyond immune cells to tissues like the spleen and thymus.

Biological function summary	IRF8 drives differentiation and maturation of various immune cell types. It forms part of protein complexes that control the expression of genes necessary for immune surveillance and defense mechanisms. IRF8 can dimerize with other IRF family members or proteins like PU.1 to modulate activity of specific target genes. This transcription factor supports the growth and differentiation of myeloid cells and helps to balance lymphoid and myeloid lineage commitment which is important for maintaining a proper immune system function.
Pathways	IRF8 is integral to the interferon signaling and hematopoietic cell lineage pathways. It enhances the expression of interferon-stimulated genes integrating signals for a potent antiviral response. The protein connects with transcriptional regulators such as IRF1 and STAT1 to modulate these pathways. By participating in hematopoietic differentiation IRF8 also influences pathways related to the immune system development and inflammatory responses.
Associated diseases and disorders	Mutations or alterations in IRF8 function associate with immunodeficiencies and hematologic malignancies. Chronic myelogenous leukemia and systemic lupus erythematosus exemplify conditions where IRF8 plays a role. Its dysfunction affects the regulation of cytokine genes which can lead to inappropriate immune responses. The protein's activity intersects with other key players such as BTK and BCL2 which are involved in disease processes related to immune cell proliferation and survival.

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

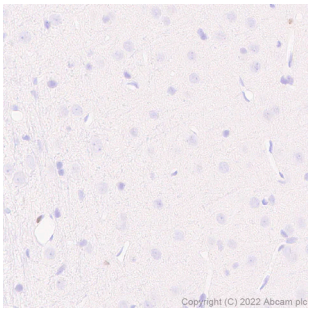
We do not recommend this combination. It is not covered by our product promise.

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.

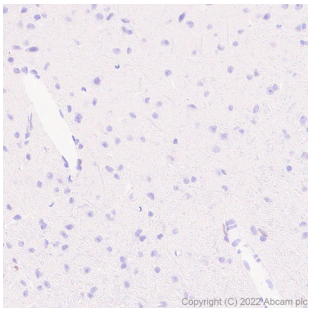
11 product images



Immunohistochemistry - Anti-IRF8 antibody [EPR26381-181] (ab307292)

IRF8 Immunohistochemistry staining of Rat cerebrum using rabbit Anti-IRF8 antibody

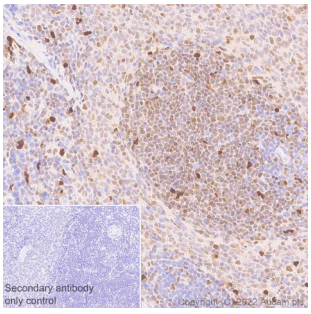
Immunohistochemical analysis of paraffin-embedded rat cerebrum tissue labeling IRF8 with ab307292 at 1/500 (1.06 ug/ml) followed by ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Negative control: almost no staining on rat cerebrum. The section was incubated with ab307292 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry - Anti-IRF8 antibody [EPR26381-181] (ab307292)

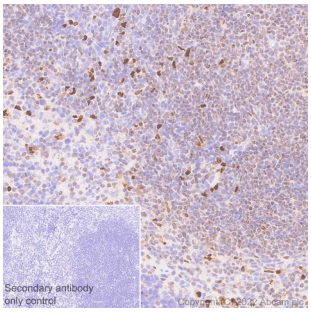
IRF8 Immunohistochemistry staining of Mouse cerebrum using rabbit Anti-IRF8 antibody

Immunohistochemical analysis of paraffin-embedded mouse cerebrum tissue labeling IRF8 with ab307292 at 1/500 (1.06 ug/ml) followed by ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Negative control: almost no staining on mouse cerebrum. The section was incubated with ab307292 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry - Anti-IRF8 antibody [EPR26381-181] (ab307292)

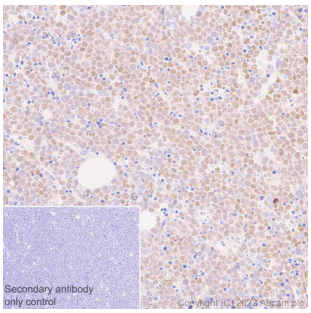
Immunohistochemical analysis of paraffin-embedded rat spleen tissue labeling IRF8 with ab307292 at 1/500 (1.06 ug/ml) followed by ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Positive staining on rat spleen. The section was incubated with ab307292 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry - Anti-IRF8 antibody [EPR26381-181] (ab307292)

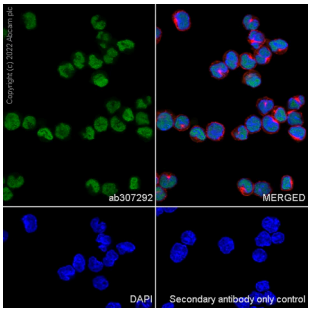
Immunohistochemical analysis of paraffin-embedded mouse spleen tissue labeling IRF8 with ab307292 at 1/500 (1.06 ug/ml) followed by ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Positive staining on mouse spleen. The section was incubated with ab307292 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary

antibody is ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



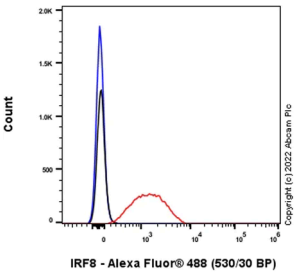
Immunohistochemistry - Anti-IRF8 antibody [EPR26381-181] (ab307292)

Immunohistochemical analysis of paraffin-embedded mouse Burkitt's lymphoma tissue labeling IRF8 with ab307292 at 1/500 (1.06 ug/ml) followed by ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Positive staining on mouse Burkitt's lymphoma. The section was incubated with ab307292 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



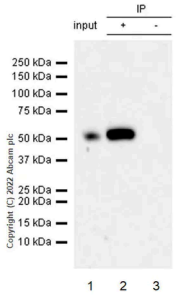
Immunocytochemistry/ Immunofluorescence - Anti-IRF8 antibody [EPR26381-181] (ab307292)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized A20 (mouse reticulum sarcoma B lymphocyte) cells labeling IRF8 with ab307292 at 1/100 (5.3 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green). Confocal image showing mainly nuclear staining in A20 cell line. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (2.5 ug/ml) dilution (Red). The nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/ml) dilution.



Flow Cytometry (Intracellular) - Anti-IRF8 antibody [EPR26381-181] (ab307292)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized A20 (mouse reticulum sarcoma B lymphocyte) cells labeling IRF8 with ab307292 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-IRF8 antibody [EPR26381-181] (ab307292)

IRF8 was immunoprecipitated from 0.35 mg A20 (mouse reticulum sarcoma B lymphocyte) whole cell lysate 10 ug with ab307292 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab307292 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution. Lane 1: A20 whole cell lysate 10 ug Lane 2: ab307292 IP in A20 whole cell lysate Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab307292 in A20 whole cell lysate Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 76 seconds.
All lanes:
Immunoprecipitation - Anti-IRF8 antibody [EPR26381-181] (ab307292) at 1/1000 dilution

Lane 1:

A20 (mouse reticulum sarcoma B lymphocyte) whole cell lysate 10 µg

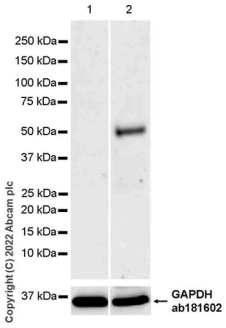
Lane 2:
A20 whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Observed band size: 48 kDa

Exposure time: 76s



Western blot - Anti-IRF8 antibody [EPR26381-181] (ab307292)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Negative and positive control: (PMID: 2111015).

Lysates were freshly made and used for Western blotting immediately to minimize protein degradation.

This blot was developed using a high sensitivity ECL substrate. The high-sensitivity ECL substrate used allows for the detection of proteins in the mid-femtogram range.

All lanes:
Western blot - Anti-IRF8 antibody [EPR26381-181] (ab307292) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate at 20 µg

Lane 2:
Mouse spleen tissue lysate at 20 µg

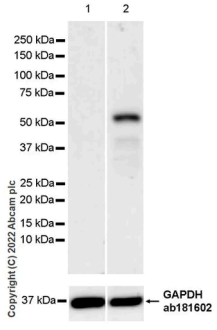
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Observed band size: 48 kDa

Exposure time: 180s



Western blot - Anti-IRF8 antibody [EPR26381-181] (ab307292)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Negative and positive control: (PMID: 2111015).

Lysates were freshly made and used for Western blotting immediately to minimize protein degradation.

This blot was developed using a high sensitivity ECL substrate. The high-sensitivity ECL substrate used allows for the detection of proteins in the mid-femtogram range.

All lanes:
Western blot - Anti-IRF8 antibody [EPR26381-181] (ab307292) at 1/1000 dilution

Lane 1:
Rat brain tissue lysate at 20 µg

Lane 2:
Rat spleen tissue lysate at 20 µg

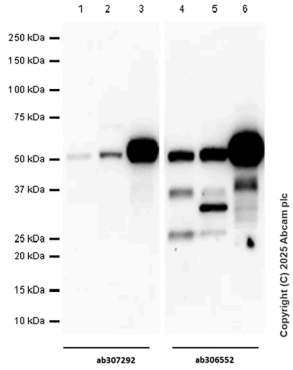
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Observed band size: 48 kDa

Exposure time: 180s



Western blot - Anti-IRF8 antibody [EPR26381-181] (ab307292)

IRF8 Western blot staining using rabbit Anti-IRF8 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Compared to ab306552, ab307292 demonstrates lower sensitivity in Western blot.

We suggest optimizing experimental protocols (increasing lysate amount, using lower dilution or higher sensitivity ECL substrate) to improve results when using ab307292 in western blot.

Lanes 1 - 3:
Western blot - Anti-IRF8 antibody [EPR26381-181] (ab307292) at 1/1000 dilution

Lanes 4 - 6:
Western blot - Anti-IRF8 antibody [EPR26382-10] (ab306552) at 1/1000 dilution

Lanes 1 and 4:
Mouse spleen tissue lysate at 20 µg

Lanes 2 and 5:
Mouse lymph node tissue lysate at 20 µg

Lanes 3 and 6:
A20 (mouse reticum sarcoma B lymphocyte) whole cell lysate at 20 µg

Secondary

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

Observed band size: 48 kDa

Exposure time: 60s

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