abcam

ab33478

Anti-IRF5 antibody [10T1]

Anti-IRF5 antibody [10T1] (ab33478) is a mouse monoclonal antibody detecting IRF5 in **Western Blot, Flow Cytometry (Intra), ICC/IF**. Suitable for **Human, Mouse**.

- KO validated for confirmed specificity
- Over 10 publications
- Trusted since 2006

KO Validated

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human IRF5. The exact immunogen used to generate this antibody is proprietary information. Database link Q13568
Clone number	10T1
Purification technique	Affinity purification Protein G
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

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

Target data

See full target information IRF5

Function Transcription factor that plays a critical role in innate immunity by activating expression of type I interferon (IFN) IFNA and INFB and inflammatory cytokines downstream of endolysosomal toll-like receptors TLR7, TLR8 and TLR9 (PubMed:11303025, PubMed:15695821, PubMed:22412986, PubMed:25326418, PubMed:32433612). Regulates the transcription of type I IFN genes (IFN-alpha and IFN-beta) and IFN-stimulated genes (ISG) by binding to an interferon-stimulated response element (ISRE) in their promoters (By similarity). Can efficiently activate both the IFN-beta (IFNB) and the IFN-alpha (IFNA) genes and mediate their

induction downstream of the TLR-activated, MyD88-dependent pathway (By similarity). Key transcription factor regulating the IFN response during SARS-CoV-2 infection (PubMed:33440148).

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

Notes

What is this antibody validated in?
Anti-IRF5 antibody [10T1] (ab33478) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse samples.

What is the molecular weight of IRF5?
Anti-IRF5 [10T1] (ab33478) specifically detects a band for IRF5 (UniProt: Q13568) at a molecular weight of 58kDa.

Trusted by the scientific community
Anti-IRF5 [10T1] (ab33478) was first used in a scientific publication in 2006 and has been cited over 10 times in peer-reviewed journals.

Specificity confirmed
The specificity of Anti-IRF5 antibody [10T1] (ab33478) has been confirmed by Western blot testing in IRF5 Knockout HAP1 cells.

Supplementary info

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

Activity summary	IRF5 or Interferon Regulatory Factor 5 is a member of the IRF family of transcription factors. This protein weighs approximately 56 kDa and is expressed in cells of the immune system including B cells dendritic cells and macrophages. IRF5 plays an important role in regulating the transcription of interferon-

	stimulated genes following a viral infection. It acts by binding to specific DNA sequences initiating transcription processes that are important for the antiviral response.
Biological function summary	IRF5 influences the immune response through the regulation of cytokine production. It activates genes involved in producing pro-inflammatory cytokines such as TNF-α and IL-6 which are important for clearing viral infections and activating immune cells. IRF5 does not usually form part of a protein complex but it interacts closely with TRAF6 and MyD88 for its activation. Its pivotal role in cytokine production highlights its importance in controlling inflammation.
Pathways	IRF5 is an important component of the Toll-like receptor (TLR) signaling pathway and plays a role in the MyD88-dependent pathway. In this context IRF5 gets activated by TLRs interacting with MyD88 and TAK1 to enhance the transcription of important genes for immune response. It is also closely connected to the IRF3 protein which shares similar activation pathways and can similarly initiate an antiviral state.
Associated diseases and disorders	Defects or dysregulation in IRF5 function are linked to autoimmune diseases such as systemic lupus erythematosus (SLE) and rheumatoid arthritis. In SLE IRF5 influences autoantibody production contributing to disease development. It works alongside other regulatory proteins involved in autoimmunity including IFN-α and STAT4 which also play significant roles in modulating immune responses. Understanding IRF5's role in these conditions could present new opportunities for therapeutic interventions using IRF5 inhibitors.

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

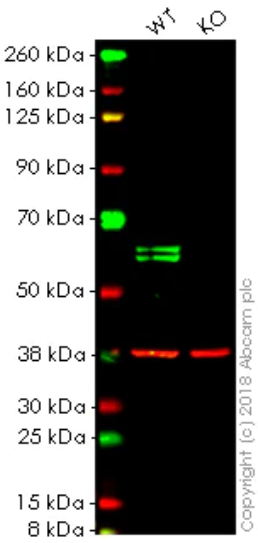
We do not recommend this combination. It is not covered by our product promise.

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.

9 product images



Western blot - Anti-IRF5 antibody [10T1] (ab33478)

Lanes 1 - 2: Merged signal (red and green). Green - ab33478 observed at 56 kDa. Red - loading control, ab181602, observed at 37 kDa.
ab33478 was shown to specifically react with IRF5 in wild-type HAP1 cells as signal was lost in IRF5 knockout cells. Wild-type and IRF5 knockout samples were subjected to SDS-PAGE. ab33478 and ab181602 (Rabbit anti-GAPDH loading control) were incubated overnight at 4°C at 1/500 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed ab216772 and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed ab216777 secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

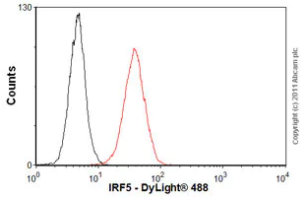
This image was produced using the ascites version of this antibody.

All lanes:
Western blot - Anti-IRF5 antibody [10T1] (ab33478) at 1/500 dilution

Lane 1:
Wild-type HAP1 whole cell lysate at 20 µg

Lane 2:
IRF5 knockout HAP1 whole cell lysate at 20 µg

Predicted band size: 56 kDa

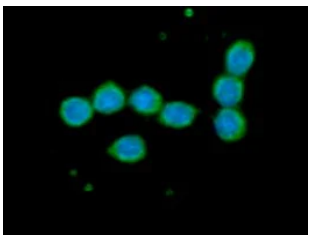


Flow Cytometry (Intracellular) - Anti-IRF5 antibody [10T1] (ab33478)

IRF5 Flow Cytometry (Intracellular) staining using mouse Anti-IRF5 antibody

Overlay histogram showing THP1 cells stained with ab33478 (red line). The cells were fixed with 4% paraformaldehyde (10 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. The cells were then incubated with the antibody (ab33478, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in THP1 cells fixed with 80% methanol (5 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.

This image was produced using the ascites version of this antibody.

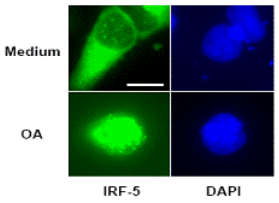


Immunocytochemistry/ Immunofluorescence - Anti-IRF5 antibody [10T1] (ab33478)

IRF5 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-IRF5 antibody

Immunocytochemistry/ Immunofluorescence analysis of IRF5 in THP-1 cells. The cell was stained with ab33478 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained

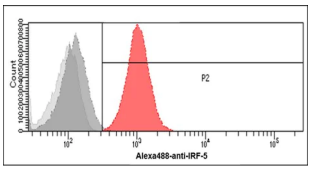
the cell nucleus (blue).



Immunocytochemistry/ Immunofluorescence - Anti-IRF5 antibody [10T1] (ab33478)

IRF5 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-IRF5 antibody

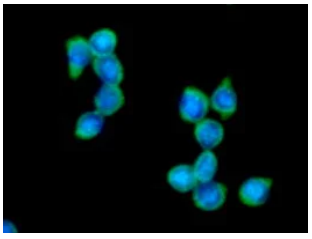
Immunofluorescence/Immunocytochemistry analysis of HEK293 cells (10^5-10^6) stained with Mouse monoclonal [10T1] to IRF5 (ab33478 1/100-1/200).
This image was produced using the ascites version of this antibody.



Flow Cytometry (Intracellular) - Anti-IRF5 antibody [10T1] (ab33478)

IRF5 Flow Cytometry (Intracellular) staining using mouse Anti-IRF5 antibody

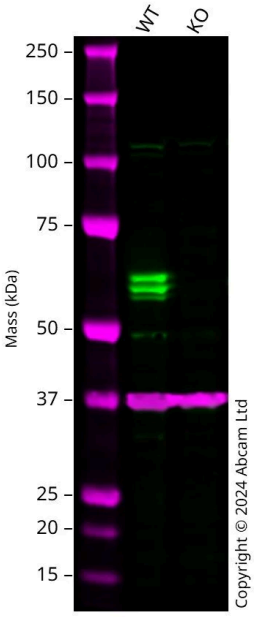
Flow cytometry analysis of IRF5 in THP-1 cell line, staining at 2-5µg for 1x10^6 cells (red line). The secondary antibody used goat anti-mouse IgG Alexa fluor 488 conjugate. Isotype control antibody was mouse IgG (black line).



Immunocytochemistry/ Immunofluorescence - Anti-IRF5 antibody [10T1] (ab33478)

IRF5 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-IRF5 antibody

Immunocytochemistry/ Immunofluorescence analysis of IRF5 in Raw264.7 cells. The cell was stained with ab33478 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).



Western blot - Anti-IRF5 antibody [10T1] (ab33478)

Western blot: Anti-IRF5 antibody [10T1] (ab33478) staining at 1/1000 dilution, shown in green; Rabbit Anti-GAPDH antibody [EPR16891] (ab181602) loading control staining at 1/20000 dilution, shown in magenta. In Western blot, ab33478 was shown to bind specifically to IRF5. A band was observed at 63 kDa in wild-type A549 cell lysates with no signal observed at this size in IRF5 knockout cell line. To generate this image, wild-type and IRF5 knockout A549 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Mouse IgG H&L 800CW and Goat anti-Rabbit IgG H&L 680RD at 1/20000 dilution.
All lanes:
Western blot - Anti-IRF5 antibody [10T1] (ab33478) at 1/1000 dilution

Lane 1:
Wild-type A549 cell lysate at 20 µg

Lane 2:
IRF5 knockout A549 cell lysate at 20 µg

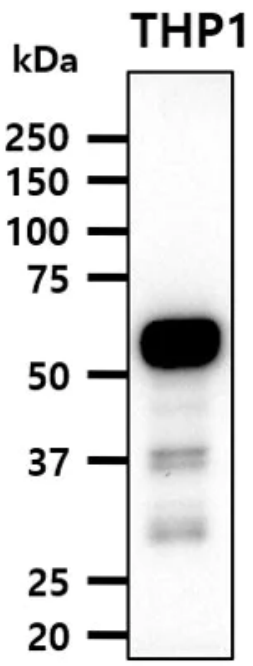
Lane 2:
Western blot - Human IRF5 knockout A549 cell line (ab301006)

Secondary

All lanes:
Goat anti-Mouse IgG H&L 800CW and Goat anti-Rabbit IgG H&L 680RD at 1/20000 dilution

Performed under reducing conditions.

Observed band size: 63 kDa



Western blot - Anti-IRF5 antibody [10T1] (ab33478)

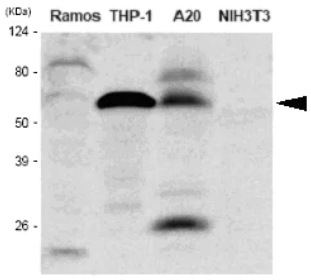
All lanes:
Western blot - Anti-IRF5 antibody [10T1] (ab33478) at 1/1000 dilution

All lanes:
THP-1 cell lysate

Secondary

All lanes:
Goat anti-mouse secondary antibody conjugated to HRP

Predicted band size: 56 kDa



Western blot - Anti-IRF5 antibody [10T1] (ab33478)

100-200µg of whole cell lysates were used for western blotting.
This image was produced using the ascites version of this antibody.

All lanes:
Western blot - Anti-IRF5 antibody [10T1] (ab33478) at 1/1000 dilution

Lane 1:
Ramos cell lysate

Lane 2:
THP-1 cell lysate

Lane 3:
A20 cell lysate

Lane 4:
NIH 3T3 cell lysate

Secondary

All lanes:
goat anti-mouse secondary antibody conjugated to HRP

Developed using the ECL technique.

Predicted band size: 56 kDa

Observed band size: 26 kDa, 58 kDa, 80 kDa

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