abcam

ab277133

# Anti-IFNGR1 antibody [062] - BSA and Azide free

Recombinant

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | Recombinant Fragment Protein within Mouse Ifngr1 aa 1-300. The exact immunogen used to generate this antibody is proprietary information. Database link P15261 |
| **Carrier free** | Yes |
| **Clone number** | 062 |
| **Purification technique** | Affinity purification Protein A |

## Reactivity data

## ICC

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/20 - 1/100 |
| **Notes** | - |

## Flow Cyt

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/25 - 1/100 |
| **Notes** | - |

## Target data

See full target information Ifngr1

**Function**

Receptor subunit for interferon gamma/INFG that plays crucial roles in antimicrobial, antiviral, and antitumor responses by activating effector immune cells and enhancing antigen presentation (, PubMed:20926559, PubMed:27286456). Associates with transmembrane accessory factor IFNGR2 to form a functional receptor (PubMed:2137461, PubMed:2530216, PubMed:2530582, PubMed:2531896, PubMed:2532365). Upon ligand binding, the intracellular domain of IFNGR1 opens out to allow association of downstream signaling components JAK1 and JAK2. In turn, activated JAK1 phosphorylates IFNGR1 to form a docking site for STAT1. Subsequent phosphorylation of STAT1 leads to its dimerization, translocation to the nucleus, and stimulation of target gene transcription (PubMed:19889125). STAT3 can also be activated in a similar manner although activation seems weaker (PubMed:15284232). IFNGR1 intracellular domain phosphorylation also provides a docking site for SOCS1 that regulates the JAK-STAT pathway by competing with STAT1 binding to IFNGR1 (PubMed:15522878).

## Storage

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|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |

## Supplementary info

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

**Activity summary**

The IFNGR1 protein also known as Interferon Gamma Receptor 1 is an integral component of the cell surface receptor for interferon-gamma (IFN-γ). It possesses a mass of approximately 53 kDa. IFNGR1 is expressed in various cell types including immune cells such as T cells and macrophages and is also present in other cell lines like HEK 293. This receptor binds to its specific ligand IFN-γ

| | |
|---|---|
| | initiating a series of intracellular events that are essential for immune response modulation. |
| **Biological function summary** | IFNGR1 functions as part of the interferon-gamma receptor complex working alongside the IFNGR2 subunit. This interaction with IFNGR2 is important for the receptor to properly transmit signals inside the cell. The binding of interferon-gamma to this receptor complex activates the JAK-STAT signaling pathway promoting the transcription of genes that enhance the antimicrobial activity of immune cells and regulate cellular immunity. |
| **Pathways** | The IFNGR1 protein plays an important role in the JAK-STAT signaling pathway which is critical for mediating responses to interferon-gamma. Upon activation by IFN-γ IFNGR1 recruits JAK kinases leading to the phosphorylation of STAT1 a significant transcription factor. STAT1 then dimerizes and translocates to the nucleus where it induces the expression of genes involved in immune defense and inflammation. This process is vital for the body's ability to handle infections and other immunological challenges. |
| **Associated diseases and disorders** | IFNGR1 is associated with susceptibility to infections and certain immune-related disorders. Mutations or deficiencies in IFNGR1 can lead to Mendelian Susceptibility to Mycobacterial Disease (MSMD) where individuals show increased vulnerability to mycobacterial infections. Additionally improper signaling through IFNGR1 is linked to chronic granulomatous disease which can involve defective functioning of the NADPH oxidase complex. Understanding IFNGR1's function and interactions is important for exploring new therapeutic strategies for these disorders. |

## 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**

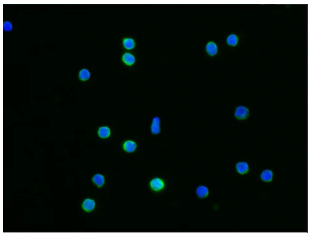
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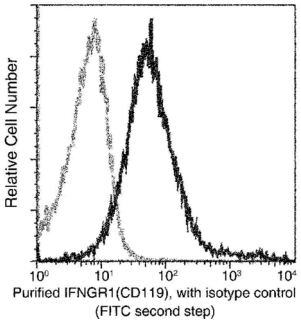
## 2 product images



### Immunocytochemistry - Anti-IFNGR1 antibody [062] - BSA and Azide free (ab277133)

IFNGR1 Immunocytochemistry staining using rabbit Anti-IFNGR1 antibody

Immunofluorescence staining of mouse IFNGR1 in mouse splenocytes. Cells were fixed with 4% PFA, blocked with 10% serum, and incubated with ab277133 at 1/60 dilution at 4°C overnight. Then cells were stained with the Alexa Fluor® 488-conjugated Goat Anti-rabbit IgG secondary antibody (green) and counterstained with DAPI (blue).




### Flow Cytometry - Anti-IFNGR1 antibody [062] - BSA and Azide free (ab277133)

IFNGR1 Flow Cytometry staining using rabbit Anti-IFNGR1 antibody

Flow cytometric analysis of IFNGR1 expression on mouse BABL/c splenocytes. Cells were stained with ab277133 at 1/25 dilution, then a FITC-conjugated second step antibody (Black). Cells were also stained with an isotype control (Grey). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.

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