abcam

ab240559

# Anti-IFN gamma Receptor beta/AF-1 antibody [EPR22171] - BSA and Azide free

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EPR22171 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.98 - 0.995 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## Flow Cyt

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |

| | |
|---|---|
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Recombinant fragment - Human |
| **Dilution info** | - |
| **Notes** | - |

## ELISA

### Tested

| | |
|---|---|
| **Species** | Recombinant fragment - Human |
| **Dilution info** | - |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Recombinant fragment - Human |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information IFNGR2

| | |
|---|---|
| **Function** | Associates with IFNGR1 to form a receptor for the cytokine interferon gamma (IFNG) (PubMed:7615558, PubMed:7673114, PubMed:8124716). Ligand binding stimulates activation of the JAK/STAT signaling pathway (PubMed:15356148, PubMed:7673114, PubMed:8124716). Required for signal transduction in contrast to other receptor subunit responsible for ligand binding (PubMed:7673114). |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |
| **Storage information** | Do Not Freeze |

## Notes

ab240559 is the carrier-free version of ab224197.

**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.

**Conjugation ready**

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

**Compatibility**

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody

preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

## Supplementary info

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

| | |
|---|---|
| **Activity summary** | The IFN gamma Receptor beta also known as IFN-γ receptor β chain or IFN gamma receptor AF-1 plays a significant role in the immune response. This receptor is part of the interferon gamma receptor complex which binds the cytokine IFN-gamma. The beta chain contributes to the formation of the receptor complex that allows functional IFN-gamma signaling. Typically the receptor is expressed on the surface of immune cells like lymphocytes and macrophages facilitating communication and response to infections and immune challenges. The exact molecular mass can vary depending on glycosylation often giving an approximate mass of 35-50 kDa. |
| **Biological function summary** | IFN gamma Receptor beta is essential for the activation of the immune system. It partners with IFN gamma Receptor alpha in the receptor complex to mediate important biological effects such as activation of macrophages and enhancement of antigen presentation. This activity boosts the cellular immune response allowing cells to better combat microbial infections and tumor growth. Without functional receptor activity cells would not effectively respond to IFN-gamma signals impeding proper immune function. |
| **Pathways** | IFN gamma Receptor beta is involved in the JAK-STAT signaling pathway which is important for mediating IFN-gamma signaling. Once IFN-gamma binds to its receptor including the beta chain it triggers the activation of JAK kinases which in turn phosphorylates STAT1. Phosphorylated STAT1 dimerizes translocates to the nucleus and influences the expression of immune regulatory genes. This pathway connects the receptor with key immune regulatory proteins playing an important role in the immune response. |
| **Associated diseases and disorders** | IFN gamma Receptor beta is associated with conditions such as chronic granulomatous disease and various mycobacterial infections. These conditions often result from immune system malfunctions where the receptor cannot properly signal IFN-gamma activity leading to an impaired defense against pathogens. The involvement of the receptor in immune pathways links it to other critical proteins like IFN gamma Receptor alpha and STAT1 both of which might be implicated in IFN-gamma-related dysfunctions contributing to these diseases. |

## 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.

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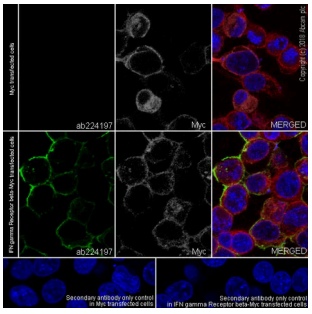
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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## 3 product images

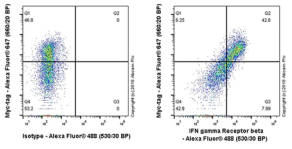



### Immunocytochemistry/ Immunofluorescence - Anti-IFN gamma Receptor beta/AF-1 antibody [EPR22171] - BSA and Azide free (ab240559)

IFN gamma Receptor beta/AF-1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-IFN gamma Receptor beta/AF-1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HEK-293T (human embryonic kidney epithelial cell) cells transfected with a Myc-tagged IFN gamma Receptor beta/AF-1 expression construct labeling IFN gamma Receptor beta/AF-1 with ab224197 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing positive staining in HEK-293T cells transfected with a Myc-tagged IFN gamma Receptor beta/AF-1 expression construct. The nuclear counterstain is DAPI (blue).
Counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at a 1/200 dilution (red) and Myc-Tag (9B11) Mouse mAb (Alexa Fluor® 647 Conjugate) (white).
The negative control is the secondary antibody only.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol and sodium azide (ab224197).

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### Flow Cytometry - Anti-IFN gamma Receptor beta/AF-1 antibody [EPR22171] - BSA and Azide free (ab240559)

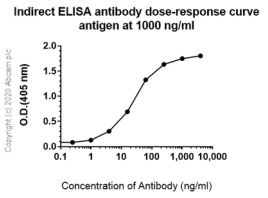
IFN gamma Receptor beta/AF-1 Flow Cytometry staining using rabbit Anti-IFN gamma Receptor beta/AF-1 antibody

Flow cytometric analysis of HEK-293T (human embryonic kidney epithelial cell) transfected with a Myc-tagged IFN gamma Receptor beta/AF-1 expression construct cell line labeling IFN gamma Receptor beta/AF-1 with ab224197 at 1/400 dilution.
Goat anti rabbit IgG (Alexa Fluor® 488, ab150077), at 1/2000 dilution was used as the secondary antibody.

Cells were surface stained with isotype control Rabbit monoclonal IgG (ab172730) (Left panel) or IFN gamma receptor beta/AF-1 (Right panel), then co-stained with Alexa Fluor® 647 conjugated-Myc-tag antibody.

Gated on viable cells.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab224197).




## ELISA - Anti-IFN gamma Receptor beta/AF-1 antibody [EPR22171] - BSA and Azide free (ab240559)

This data was developed using ab224197, the same antibody clone in a different buffer formulation.ELISA analysis of Human IFNGR2 recombinant protein at 1000 ng/mL with ab224197. An Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) at 1/2500 dilution was used as the secondary antibody.

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