abcam

ab7373

Anti-Interferon alpha 1 antibody [F18]

Key facts

Isotype	IgG1
Host species	Rat
Storage buffer	Preservative: 0.1% Sodium azide Constituents: PBS, 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Clone number	F18
Purification technique	Affinity purification Protein G
Specificity	This monoclonal antibody binds and neutralizes both natural and recombinant mouse alpha Interferon 1. This antibody does not cross-react with Human Interferon, Mouse Interferon beta or Mouse Interferon gamma.
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	0.2 µm filtered antibody solution.

Reactivity data

Flow Cyt

Expected

Species	Mouse
Dilution info	-

Notes	ab18407 - Rat monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Not recommended

Species	Human
Dilution info	-
Notes	ab18407 - Rat monoclonal IgG1, is suitable for use as an isotype control with this antibody.

FuncS (Neut/Block)

Expected

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

Not recommended

Species	Human
Dilution info	-
Notes	-

AP

Expected

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

Not recommended

Species	Human
Dilution info	-
Notes	-

Target data

See full target information Ifna1

Function	Produced by macrophages, IFN-alpha have antiviral activities. Interferon stimulates the production of two enzymes: a protein kinase and an oligoadenylate synthetase.

Storage

Shipped at conditions	Blue Ice
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

With the availability of monoclonal antibodies directed against alpha Interferon, it is possible to interpret results obtained from crude materials containing both alpha and beta Interferon. The difficulties in studying in vitro and in vivo effects of "type 1" Interferons arise from the fact that both alpha and beta Interferons are produced in response to the same stimuli and also seem to act via the same receptor. These Interferon activities can only be distinguished from one another by use of specific neutralizing antibodies.

Supplementary info

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

Activity summary	Interferon alpha 1 (IFN-α1) is a type I interferon with significant antiviral and immunomodulatory activities. Alternate names include interferon alpha and IFNA1. This protein weighs approximately 19 kDa and expresses predominantly in leukocytes. It interacts with specific cell surface receptors to initiate various protective mechanisms in the cell. Researchers often study IFN-alpha-1 protein using techniques like interferon alpha ELISA and IFN-α ELISA for its effective quantification in experimental analyses.
Biological function summary	Interferon alpha 1 functions as an important player in the immune response against viral infections. It belongs to a family of cytokines that signal through the JAK-STAT pathway to induce the expression of interferon-stimulated genes (ISGs). IFN-α1 operates independently and does not form large complexes with other

	proteins ensuring a focused response to pathogens. This protein's role is critical for the initiation of immune responses and limiting the spread of viruses within the host organism.
Pathways	Interferon alpha 1 activates intracellular signaling cascades mainly the JAK-STAT pathway and NF-κB pathway. These pathways have important roles in cellular defense mechanisms. In the JAK-STAT pathway IFN-α1 interacts closely with other interferons and cytokines to enhance antiviral states. Through these pathways it shares functional relationships with proteins such as STAT1 and IRF7 which are critical for mounting effective antiviral defenses.
Associated diseases and disorders	Interferon alpha 1 relates closely to conditions like hepatitis C and multiple sclerosis. It has therapeutic applications in these diseases due to its immunoregulatory effects. IFN-α1 interacts with various immune system components including major histocompatibility complex (MHC) proteins to modulate immune responses. Abnormalities in IFN-α1 signaling or expression can exacerbate inflammatory and autoimmune disorders linking it to both protective and pathological roles in human health.

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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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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