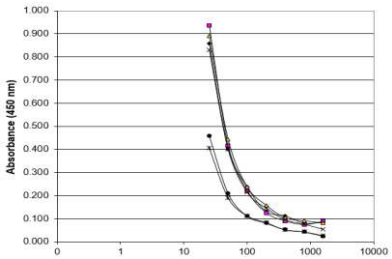
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	IFN-Alpha, Mouse, clone F18		
Catalog number	HM1001-5MG		
Lot number	-	**Expiry date**	-
Volume	-	**Amount**	5 mg
Formulation	0.2 µm filtered in PBS	**Concentration**	>0.5 mg/ml
Host Species	Rat IgG1	**Conjugate**	None
Endotoxin level	<24 EU/mg	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #				2,4	3	1		
Yes				●	●	●		●
No								
N.D.	●	●	●				●	

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



IA: HM1001 has been used as a capture antibody to determine specificity.

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- FC: For intracellular staining of IFN-α, cells can be fixed in 1 % formaldehyde; blocked and permeabilized in 0.2 % saponin, 5 % normal rabbit serum for 30 minutes on ice. (Ref.2).
- FS: Neutralization of IFN-α by adding 1 µg antibody F18 per mouse i.v. before treatment with 35 µg LPS i.p., decreased the LPS-induced IL-1β serum response. (Ref.3).

General Information

Description

The monoclonal antibody F18 recognizes and neutralizes both natural and recombinant mouse alpha Interferon (IFN-α). IFN-α is a cytokine that belongs to the type I interferons (IFN-I). IFN-α is secreted by many cell types including lymphocytes (NK cells, B-cells and T-cells), macrophages, fibroblasts, endothelial cells, osteoblasts, microglia and others. Interferons stimulate both macrophages and NK cells to elicit an anti-viral response, and are also active against tumors. Although all cells can produce IFN-I, plasmacytoid dendritic cells (pDCs) produce 1,000-fold higher levels than other cell types, and are responsible for systemic IFN-I responses to many viruses. They are coined as the natural IFN-producing cells. However, under deprived pDC condition, other dendritic cells are capable of producing high levels of IFN-I.

Interferons were initially characterized for their ability to 'interfere' with viral replication, slow cell proliferation, and profoundly alter immunity. IFN-α has several regulatory roles and diverse biological activities, including control of cellular and humoral immune responses, inflammation, and tumor regression. In addition, IFN-α participates in the regulation of various cellular and humoral processes such as the endocrine system modulates behavior, brain activity, temperature, glucose sensitive neurons, feeding pattern and opiate activity.

With the availability of monoclonal antibodies directed against IFN-α, it is possible to interpret results obtained from crude materials containing both IFN-α and IFN-β. 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.

Aliases IFN-α

Cross reactivity Human IFN: No
Mouse IFN-β: No
Mouse IFN-γ: No

References

1. Dalod, M et al; Interferon α/β and interleukin 12 responses to viral infections: pathways regulating dendritic cell cytokine expression in vivo. J Exp Med 2002, 195: 517
2. Diebold, S et al; Viral infection switches nonplasmacytoid dendritic cells into high interferon producers. Nature 2003, 424: 324
3. Joshi, V et al; A role for Stat1 in the regulation of lipopolysaccharide-induced Interleukin-1β expression. J Interferon Cytokine Res 2006, 26: 739.
4. Wilkstrom, M et al; A Chemokine-Like Viral Protein Enhances Alpha Interferon Production by Plasmacytoid Dendritic Cells but Delays CD8 T Cell Activation and Impairs Viral Clearance. J Virol 2013, 87:7911

Storage&stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

Precautions For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC	Date
Brenda Teunissen	07/10/2019

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.