Technical Data Sheet

Purified NA/LE Mouse anti-Mouse IFN-α/β Receptor 1

Product Information

Material Number:	**561183**
Alternate Name:	Interferon-alpha/beta Receptor 1; IFN-R-1; Ifar; Ifnar; Ifrc; Infar
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	MAR1-5A3
Immunogen:	Mouse Ifnar1 extracellular domain DNA
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2μm sterile filtered. Endotoxin level is ≤0.01 EU/μg (≤0.001 ng/μg) of protein as determined by the LAL assay.

Description

The MAR1-5A3 monoclonal antibody specifically binds to the IFN-α/β Receptor 1 (also known as Interferon-alpha/beta Receptor 1; Type I Interferon Receptor 1 or IFNAR-1) subunit. A variety of cell types including lymphocytes, monocytes/macrophages, dendritic cells, and fibroblasts can be stimulated or induced by viral and microbial infections to produce and secrete type I interferons, including Interferon-alpha (IFN-α) subtypes and Interferon-beta (IFN-β). IFN-α subtypes and IFN-β bind to a common heterodimeric receptor complex (also known as the Type I IFN Receptor or IFN-α/β Receptor) that is comprised of transmembrane glycoprotein IFNAR-1 and IFNR-2 subunits and is expressed on most cell types. Upon ligand binding, IFNAR-1 and IFNAR-2 signal cellular responses. Type I interferons are multifunctional proteins that can induce antiviral states in cells as well as regulate the activation, growth, proliferation, differentiation and viability of various cell types including cells that mediate innate and adaptive immunity as well as autoimmune diseases. The MAR1-5A3 monoclonal antibody blocks Type I IFN receptor signaling and in vitro and in vivo biologic responses caused by type I interferons. The MAR1-5A3 antibody has also been reported to be useful for immunofluorescent staining and flow cytometric analysis, immunoprecipitation and Western blot analysis of IFNAR-1.

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Application

Flow cytometry	Routinely Tested
Blocking	Reported

Suggested Companion Products

Catalog Number	Name	Size	Clone
553447	Purified NA/LE Mouse IgG1 κ Isotype Control	0.5 mg	107.3

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Dunn GP, Bruce AT, Sheehan KC, et al. A critical function for type I interferons in cancer immunoediting. *Nat Immunol.* 2005; 6(7):722-729. (Clone-specific: Blocking, Functional assay)

Sheehan KC, Lai KS, Dunn GP, et al. Blocking monoclonal antibodies specific for mouse IFN-alpha/beta receptor subunit 1 (IFNAR-1) from mice immunized by in vivo hydrodynamic transfection. *J Interferon Cytokine Res.* 2006; 26(11):804-819. (Clone-specific: Blocking, ELISA, Flow cytometry, Functional assay)

Strobl B, Bubic I, Bruns U, et al. Novel functions of tyrosine kinase 2 in the antiviral defense against murine cytomegalovirus. *J Immunol.* 2005; 175(6):4000-4008. (Biology)

Swann JB, Hayakawa Y, Zerafa N, et al. Type I IFN contributes to NK cell homeostasis, activation, and antitumor function. *J Immunol.* 2007; 178(2):7540-7549. (Clone-specific: Blocking, Functional assay)

Theofilopoulos AN, Baccala R, Beutler B, Kono DH. Type I interferons (alpha/beta) in immunity and autoimmunity. *Annu Rev Immunol.* 2005; 23:307-336. (Biology)

Uze G, Lutfalla G, Bandu MT, Proudhon D, Mogensen KE. Behavior of a cloned murine interferon alpha/beta receptor expressed in homospecific or heterospecific background. *Proc Natl Acad Sci U S A.* 1992; 89(10):4774-4778. (Biology)

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