PRODUCT INFORMATION

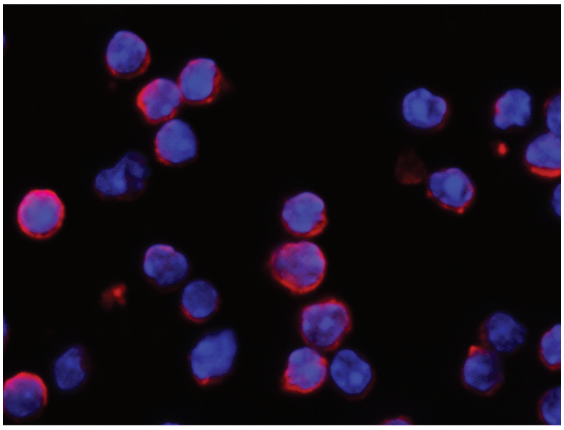
IFNAR1 Rabbit Monoclonal Antibody

Item No. 38087

Overview and Properties

Contents:	This vial contains 50 or 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Interferon Alpha/Beta Receptor 1, Interferon α/β Receptor 1, CRF2-1, CRF2 member 1, Cytokine Receptor Class-II Member 1, Cytokine Receptor Family 2 Member 1, Type I IFN Receptor 1, Type I Interferon Receptor 1
Immunogen:	Recombinant mouse IFNAR1
Cross Reactivity:	(+) *Ifnar1*
Species Reactivity:	(+) Mouse; other species not tested
Form:	Liquid
Storage:	80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	110
Host:	Rabbit
Isotype:	IgG
Applications:	Immunocytochemistry (ICC) and Immunofluorescence (IF); the recommended starting concentration is 1:20-1:100 for ICC and IF. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Immunofluorescent analysis of mouse IFNAR1 in mouse splenocytes. Cells were fixed with 4% PFA, blocked with 10% serum, and incubated with IFNAR1 Rabbit Monoclonal Antibody at a dilution of 1:60 at 37°C for one hour. Cells were then stained with an Alexa Fluor® 594-conjugated goat anti-rabbit IgG secondary antibody (red) and counterstained with DAPI (blue).

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Description

α/β receptor 1 (IFNAR1), also known as type I IFN receptor 1, is a class II helical cytokine receptor involved in the antiviral response.[1] It is composed of an extracellular domain, which contains four fibronectin type III subdomains, a transmembrane domain, and an intracellular domain, which contains a tyrosine kinase 2 (TYK2) phosphorylation site, and forms a heterodimer with IFNAR2.[2] It is ubiquitously expressed and binds to type I IFNs, including IFN-α, IFN-β, and IFN-ω, which, upon binding, together with IFNAR2 signals through JAK1, TYK2, and various STATs.[3] Knockout of *Ifnar1* sensitizes fibroblasts to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection *in vitro* and has commonly been used as an immunosuppressive model to study viral infections *in vivo*.[4,5] SNPs in *IFNAR1* are associated with increased risk of viral infections, lung cancer, multiple sclerosis, and cerebral malaria, as well as adverse reactions to vaccinations.[1] Cayman's IFNAR1 Rabbit Monoclonal Antibody can be used for immunocytochemistry (ICC) and immunofluorescence (IF) applications.

References

1. de Weerd, N.A., J.P., V., Lim, S.S., *et al.* Structural integrity with functional plasticity: What type I IFN receptor polymorphisms reveal. *J. Leukoc. Biol.* **108(3),** 909-924 (2020).
2. Borden, E.C., Sen, G.C., Uze, G., *et al.* Interferons at age 50: Past, current and future impact on biomedicine. *Nat. Rev. Drug Discov.* **6(12),** 975-990 (2007).
3. de Weerd, N.A. and Nguyen, T. The interferons and their receptors - distribution and regulation. *Immunol. Cell Biol.* **90(5),** 483-491 (2012).
4. Zhang, Q., Bastard, P., Liu, Z., *et al.* Inborn errors of type I IFN immunity in patients with life-threatening COVID-19. *Science* **370(6515),** eabd4570 (2020).
5. Marín-Lopez, A., Calvo-Pinilla, E., Moreno, S., *et al.* Modeling arboviral infection in mice lacking the interferon alpha/beta receptor. *Viruses* **11(1),** 35 (2019).

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