Mouse IFN-γ R2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1185

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IFN-γ R2 in direct ELISAs and Western blots. In Western blots, approximately 5% cross-reactivity with recombinant human IFN-γ R2 is observed and less than 1% cross-reactivity with recombinant mouse (rm) IFN-γ R1 and rmIFN-α/β R2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse IFN-γ R2 Ser21-Val243 Accession # NP_032364
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

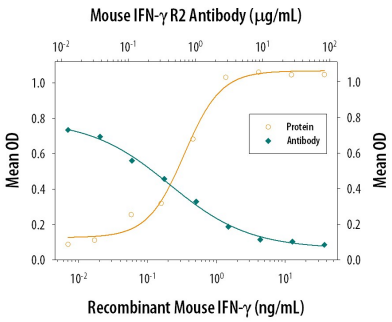
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse IFN-γ R2
Neutralization	Measured by its ability to neutralize IFN-γ R2-mediated inhibition of EMCV-induced cytopathy in the L-929 mouse fibroblast cell line. The Neutralization Dose (ND_{50}) is typically 0.2-0.8 µg/mL in the presence of 1 ng/mL Recombinant Mouse IFN-γ.	

DATA

Neutralization



IFN-γ Inhibition of EMCV-induced Cytopathy and Neutralization by Mouse IFN-γ R2 Antibody. Recombinant Mouse IFN-γ (Catalog # 485-MI) reduces the Encephalomyocarditis Virus (EMCV)-induced cytopathy in the L-929 mouse fibroblast cell line in a dose-dependent manner (orange line). Inhibition of EMCV activity elicited by Recombinant Mouse IFN-γ (1 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Mouse IFN-γ R2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1185). The ND_{50} is typically 0.2-0.8 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

IFN-γ R2 (Interferon gamma receptor 2; also called IFN-γ Rβ IFN-γ RII, or AF1) is a 60-64 kDa type I transmembrane glycoprotein that is a member of the class II cytokine receptor family of molecules (1). It is widely expressed as part of a preassembled cell surface multimeric complex. In the absence of IFN-γ, the complex contains two each of IFN-γ R1, R2 and Jak1 molecules (2). Binding of IFN-γ to IFN-γ R1 recruits Jak2 to IFN-γ R2 and initiates phosphorylation, STAT1 binding, conformational changes, and transcriptional regulation, which mainly inhibits proliferation and/or promotes apoptosis (2, 3). Mouse IFN-γ R2 cDNA encodes 332 amino acids (aa), including a signal sequence (aa 1-27), an extracellular region (ECD, aa 28-243) with two fibronectin type III domains, a transmembrane sequence (aa 244-264) and a cytoplasmic tail (aa 265-332) (1, 2). Within the ECD, mouse IFN-γ R2 shares 80% aa sequence identity with rat IFN-γ R2, and 49-55% with human, canine, porcine and bovine IFN-γ R2. IFN-γ R1 and R2 must be from the same species for receptor complexes to be active, and human IFN-γ is not active on the mouse IFN-γ receptor complex (1, 2). IFN-γ R1 is essential for ligand binding and is more constitutively expressed, while IFN-γ R2 is essential for signaling, and its more limited expression controls cell response to IFN-γ (2, 3). For example, mouse T cell IFN-γ R2 is down-regulated during differentiation to subtypes such as Th1 which produce IFN-γ. (3, 4) This allows expansion of activated cells without growth arrest due to paracrine response to IFN-γ. Following expansion, IFN-γ R2 is re-expressed to limit the immune reaction (5). IFN-γ signaling mediates control of intracellular pathogens such as mycobacteria (3, 4, 6). In humans, deficiency of IFN-γ R2 or other IFN-γ pathway molecules causes the MSMD (mendelian susceptibility to mycobacterial diseases) syndrome (6-8).

References:

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