

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
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
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Neutralization	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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).

PRODUCT SPECIFIC NOTICES

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