

DESCRIPTION

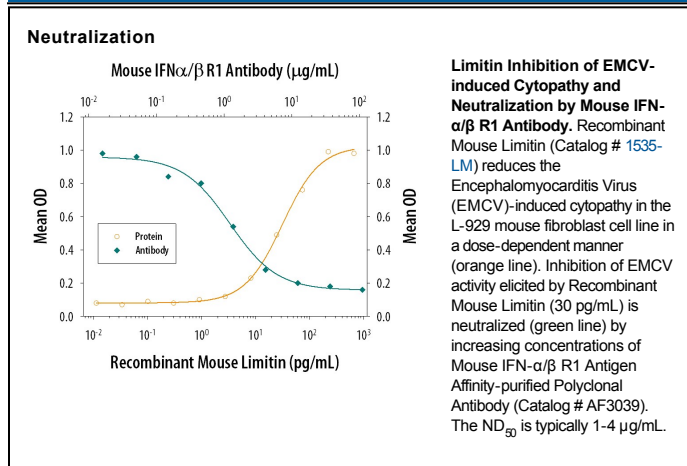
Species Reactivity	Mouse
Specificity	Detects mouse IFN- α/β R1 in direct ELISAs and Western blots. In direct ELISAs, less than 2% cross-reactivity with recombinant mouse (rm) IFN- α/β R2, rmIFN- γ R1, and rmIFN- γ R2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse IFN- α/β R1 Glu27-Thr429 Accession # P33896
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m 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 μ g/mL	Recombinant Mouse IFN- α/β R1 (Catalog # 3039-AB)
Neutralization		Measured by its ability to neutralize IFN- α/β R1-mediated inhibition of EMCV-induced cytopathy in the L-929 mouse fibroblast cell line. The Neutralization Dose (ND ₅₀) is typically 1-4 μ g/mL in the presence of 30 μ g/mL Recombinant Mouse Limitin.

DATA



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. <ul style="list-style-type: none"> ● 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.

BACKGROUND

IFN- α/β R1, also known as IFNAR1, belongs to the class II cytokine receptor family of proteins. Class II cytokine receptors form heterodimeric receptor complexes that mediate class II cytokine signals. Subunits of the different receptor complexes are shared and serve multiple functions (1-3). IFN- α/β R1, in association with IFN- α/β R2, is required for propagating antiviral signal transduction triggered by IFN- α and IFN- β (4, 5). The mouse IFN- α/β R1 cDNA encodes a 590 amino acid (aa) precursor including a 26 aa signal sequence, a 403 aa extracellular domain (ECD), a 20 aa transmembrane segment, and a 141 aa cytoplasmic domain (6). The ECD contains three tandem fibronectin type III repeats and is extensively glycosylated. The ECD of mouse IFN- α/β R1 shares 47-48% aa identity with that of human, bovine, porcine, and ovine IFN- α/β R1. IFN- α/β R1 interacts very weakly or not at all with type 1 interferons and does not stably interact with IFN- α/β R2. Ligands associate with IFN- α/β R2, and this complex subsequently forms a stable ternary assembly with IFN- α/β R1 (7, 8). IFN- α/β R1 also associates with IFN- γ R2 even in the absence of IFN- γ stimulation (5). Tyrosine phosphorylation within the juxtamembrane cytoplasmic domain of IFN- α/β R1 provides a docking site for the SH2 domains of Tyk2 and STAT2 (9-11). Tyk2 can directly phosphorylate IFN- α/β R1 (10). Tyk2 also increases the level of cell surface expression of IFN- α/β R1 by preventing constitutive internalization (12). Human IFN- α/β R1 contains a nuclear localization signal in its ECD which is required for receptor translocation to the nucleus following interaction with ligand (13).

References:

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