Mouse IFN-α/β R1 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF3039

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IFN–α/β R1 in Western blots. In Western blots, less than 1% 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
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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-α/β R1 (Catalog # 3039-AB)
Immunocytochemistry	5-15 µg/mL	Immersion fixed mouse splenocytes

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.
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.

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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