Mouse IFN-α/β R1 Alexa Fluor® 594-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3039T
100 µg

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
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-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).

PRODUCT SPECIFIC NOTICES

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