

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-29/IFN-λ1 in ELISAs. In sandwich immunoassays, 100% cross-reactivity with recombinant human (rh) IL-28B/IFN-λ3 and 20% with rhIL-28A is observed. No cross-reactivity or interference was observed with rhIFN-αA, rhIFN-αB2, rh
Source	Monoclonal Mouse IgG _{2A} Clone # 247801
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL-29/IFN-λ1 Gly20-Thr200 Accession # Q8IU54
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 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.

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
Neutralization	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

IL-28A, IL-28B, and IL-29, also named interferon-λ2 (IFN-λ2), IFN-λ3, and IFN-λ1, respectively, are class II cytokine receptor ligands that are distantly related to members of the IL-10 family (11-13% aa sequence identity) and the type I IFN family (15-19% aa sequence identity) (1-3). The genes encoding these three cytokines are localized to chromosome 19 and each is composed of multiple exons. The exon organization of these genes is also found in the IL-10 family genes but is distinct from the type I IFNs, which are encoded within a single exon. The expression of IL-28A, B, and IL-29 is induced by virus infection or double-stranded RNA. All three cytokines exert bioactivities that overlap those of type I IFNs, including antiviral activity and up-regulation of MHC class I antigen expression. The three proteins signal through the same heterodimeric receptor complex that is composed of the IL-10 receptor β (IL-10 Rβ) and a novel IL-28 receptor α (IL-28 Rα, also known as IFN-λ R1). Ligand binding to the receptor complex induces Jak kinase activation and STAT1 and STAT2 tyrosine phosphorylation. The phosphorylated STAT1 and STAT2 complex with IFN-regulatory factor 9 (IRF-9) to form the IFN-stimulated regulatory factor 3 (ISGF-3) transcription factor complex that is translocated to the nucleus. ISGF-3 binds to the IFN-stimulated response element (ISRE) present in the regulatory region of the target genes. Human IL-29 cDNA encodes a 200 amino acid (aa) residue precursor protein with a putative 19 aa signal peptide and a 181 aa mature protein, which is a monomer in solution. It shares 67% and 69% aa sequence identity with human IL-28A and IL-28B, respectively.

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