Human IL-28A/IFN-λ2 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: BAF1587

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-28A/IFN-λ2 in ELISAs and Western blots. In Western blots, approximately 50% cross-reactivity with recombinant human (rh) IL-28B is observed. In sandwich immunoassays, approximately 3.5% cross-reactivity with rhIL-28B is observed, and less than 0.3% cross-reactivity with recombinant mouse IL-28 and rhIL-29 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL-28A Val26-Val200 Accession # NP_742150
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 Human IL-28A/IFN-λ2 (Catalog # 1587-IL)
Human IL-28A/IFN-λ2 Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Human IL-28A/IFN-λ2 Antibody (Catalog # MAB15871)
ELISA Detection	0.1-0.4 µg/mL	Human IL-28A/IFN-λ2 Biotinylated Antibody (Catalog # BAF1587)
Standard		Recombinant Human IL-28A/IFN-λ2 (Catalog # 1587-IL)

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

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 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 anti-viral 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 regions of the target genes. Human IL-28A cDNA encodes a 200 amino acid (aa) residue precursor protein with a putative 25 aa signal peptide. It shares 94% and 67% aa sequence identity with human IL-28B and human IL-29, respectively.

References:

1. Vilcek, J. (2003) Nature Immunol. **4**:8.
2. Sheppard, P. *et al.* (2003) Nature Immunol. **4**:63.
3. Kotenko, S.V. *et al.* (2003) Nature Immunol. **4**:69.

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