

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-28B/IFN- λ 3 in direct ELISAs and Western blots. In direct ELISAs, approximately 70% cross-reactivity with recombinant mouse IL-28A/IFN- λ 2 is observed. In Western blots, less than 5% cross-reactivity with recombinant human (rh) IL-28A is observed and less than 1% cross-reactivity with rhIL-29 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse IL-28B/IFN- λ 3 Asp20-Val193 Accession # NP_796370
Formulation	Lyophilized from a 0.2 μ m 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 μ g/mL	Recombinant Mouse IL-28B/IFN- λ 3 (Catalog # 1789-ML)

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. <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

IL-28A, IL-28B, and IL-29, also named interferon- λ 2 (IFN- λ 2), IFN- λ 3, and IFN- λ 1, respectively, are class II cytokine receptor ligands that are distantly related to members of the IL-10 family (11-13% amino acid (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 R β) and a novel IL-28 receptor α (IL-28 R α , 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. Mouse IL-28B cDNA encodes a 193 amino acid residue precursor protein with a putative 15 aa signal peptide. It shares 61%, 62%, and 52% aa sequence identity with human IL-28A, 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.