

## DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse IL-28B/IFN-λ3 in ELISAs. In sandwich immunoassays, 100% cross-reactivity with recombinant mouse IL-28A/IFN-λ2 and no cross-reactivity with recombinant human (rh) IL-28A or rhIL-29 is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>2B</sub> Clone # 244716
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant mouse IL-28B/IFN-λ3 Asp20-Val193 Accession # Q8CGK6
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

## APPLICATIONS

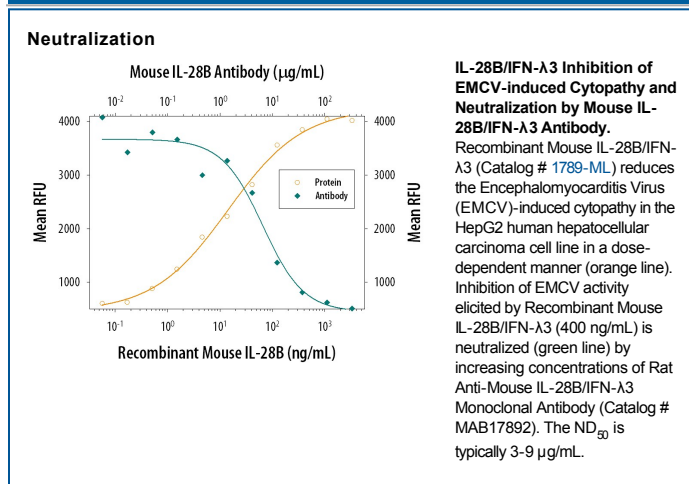
**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

### Mouse IL-28A/IFN-λ2 Sandwich Immunoassay

		Reagent
<b>ELISA Capture</b>	2-8 µg/mL	Mouse IL-28A/B (IFN-λ 2/3) Antibody (Catalog # MAB17892)
<b>ELISA Detection</b>	0.5-2.0 µg/mL	Mouse IL-28A/B (IFN-λ 2/3) Biotinylated Antibody (Catalog # BAM17891)
<b>Standard</b>		Recombinant Mouse IL-28B/IFN-λ3 (Catalog # 1789-ML)

**Neutralization** Measured by its ability to neutralize IL-28B/IFN-λ3 and IL-28A/IFN-λ2 inhibition of EMCV-induced cytopathy in the HepG2 human hepatocellular carcinoma cell line. Sheppard, P. *et al.* (2003) *Nat. Immunol.* 4:63. The Neutralization Dose (ND<sub>50</sub>) is typically 3-9 µg/mL in the presence of 400 ng/mL Recombinant Mouse IL-28B/IFN-λ3.

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Human IL-28A, IL-28B, and IL-29, also named interferon- $\lambda$ 2 (IFN- $\lambda$ 2), IFN- $\lambda$ 3, and IFN- $\lambda$ 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  $\beta$  (IL-10 R $\beta$ ) and a novel IL-28 receptor  $\alpha$  (IL-28 R $\alpha$ , also known as IFN- $\lambda$  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.