

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-28A/IFN-λ2 in direct ELISAs.
<b>Source</b>	Recombinant Monoclonal Mouse IgG <sub>1</sub> Clone # 884113R
<b>Purification</b>	Protein A or G purified from cell culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human IL-28A/IFN-λ2 Val26-Val200 Accession # NP_742150
<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 either lyophilized or 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.

<b>ELISA</b>	This antibody functions as an ELISA capture antibody when paired with Mouse Anti-Human IL-28A/IFN-λ2 Monoclonal Antibody (Catalog # <a href="#">MAB15874</a> ).  <i>This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human IL-28A/IFN-lambda 2 DuoSet ELISA Kit (Catalog # <a href="#">DY1587</a>) for convenient development of a sandwich ELISA.</i>
--------------	--

**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**

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 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 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.