Mouse IL-28A/IFN-λ2 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF4635

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-28A/IFN-λ2 in direct ELISAs and Western blots. In Western blots, approximately 50% cross-reactivity with recombinant mouse IL-28B is observed and less than 5% cross-reactivity with recombinant human (rh) IL-28A and rhIL-28B is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse IL-28A/IFN-λ2 Asp20-Val193 Accession # NP_001019844
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	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.

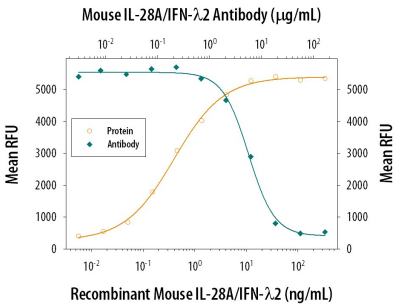
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse IL-28A/IFN-λ2 (Catalog # 4635-ML)
Neutralization	Measured by its ability to neutralize 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_{50}) is typically 3-15 µg/mL in the presence of 20 ng/mL Recombinant Mouse IL-28A/IFN-λ2.	

DATA

Neutralization



IL-28A/IFN-λ2 Inhibition of EMCV-induced Cytopathy and Neutralization by Mouse IL-28A/IFN-λ2 Antibody. Recombinant Mouse IL-28A (Catalog # 4635-ML) reduces the Encephalomyocarditis Virus (EMCV)-induced cytopathy in the HepG2 human hepatocellular carcinoma cell line in a dose-dependent manner (orange line). Inhibition of EMCV activity elicited by Recombinant Mouse IL-28A (20 ng/mL) is neutralized (green line) by increasing concentrations of Sheep Anti-Mouse IL-28A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4635). The ND_{50} is typically 3-15 µg/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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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.

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BACKGROUND

IL-28A (also named interferon-λ2, IFN-λ2), IL-28B (IFN-λ3) and IL-29 (IFN-λ1) are type III interferons that are class II cytokine receptor ligands (1-4). They are distantly related to members of the IL-10 family and type I IFN family (1-4). Mouse IL-28A cDNA encodes a 193 amino acid (aa) protein with a 19 aa signal peptide and a 174 aa mature protein that lacks N-glycosylation sites. Mature mouse IL-28A shares 81% and 66% aa sequence identity with rat and human IL-28A, respectively, and functions across species (5). Mouse IL-28A and IL-28B share 97% aa identity; the mouse lacks a functional IL-29 gene (4). Type III interferons are widely expressed, but are mainly produced by antigen presenting cells in response to viruses and double-stranded RNA that interact with Toll-like receptors or RIG-1 family helicases (2-6). They signal through a widely expressed receptor that is a heterodimer of the IL-10 receptor β (IL-10 Rβ) and IL-28 receptor α (IL-28 Rα; also called IFN-λ R1) (2, 3, 7, 9). Interaction of either type I or type III IFNs with their receptors activates similar pathways, including JAK tyrosine kinase activation, STAT phosphorylation and formation of the IFN-stimulated regulatory factor 3 (ISGF-3) transcription factor complex (1-3). Both type I and III IFNs induce antiviral activity and upregulate MHC class I antigen expression (2-6). Cell lines responsive to type III IFNs are also responsive to type I IFNs, but in general, higher concentrations of type III IFNs are needed for similar *in vitro* responses (8). *In vivo*, however, type III IFNs enhance levels of IFN-γ in serum, suggesting that the robust antiviral activity of type III IFNs may stem in part from activation of the immune system (5, 7). Anti-proliferative and antitumor activity *in vivo* has also been shown for type III IFNs (9-11).

References:

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