

**DESCRIPTION**

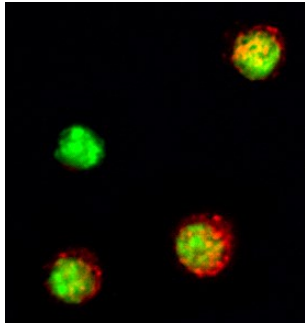
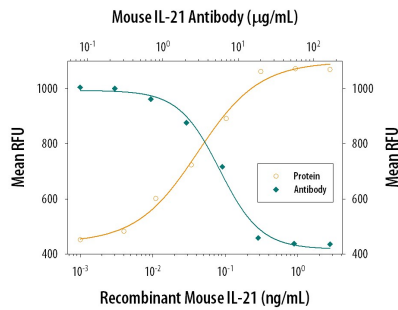
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse IL-21 in ELISAs and Western blots. In sandwich ELISAs, less than 0.5% cross-reactivity with recombinant mouse (rm) IL-2, rmlL-4, rmlL-15, and recombinant human IL-21 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant mouse IL-21 (R&D Systems, Catalog # 594-ML) Pro25-Ser146 Accession # Q9ES17
<b>Endotoxin Level</b>	<0.30 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Mouse IL-21 (Catalog # 594-ML)
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below
<b>Mouse IL-21 Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	0.2-0.8 µg/mL	Mouse IL-21 Antibody (Catalog # AF594)
<b>ELISA Detection</b>	0.1-0.4 µg/mL	Mouse IL-21 Biotinylated Antibody (Catalog # BAF594)
<b>Standard</b>		Recombinant Mouse IL-21 (Catalog # 594-ML)
<b>Neutralization</b>		Measured by its ability to neutralize IL-21-induced proliferation in the N1186 human T cell line. The Neutralization Dose (ND <sub>50</sub> ) is typically 5-15 µg/mL in the presence of 250 ng/mL Recombinant Mouse IL-21.

**DATA**

<p><b>Immunocytochemistry</b></p>  <p><b>IL-21 in Mouse Splenocytes.</b> IL-21 was detected in immersion fixed concanavalin A-stimulated mouse splenocytes using 15 µg/mL Mouse IL-21 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF594) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained (green). View our protocol for <a href="#">Fluorescent ICC Staining of Non-adherent Cells</a>.</p>	<p><b>Neutralization</b></p>  <p><b>Cell Proliferation Induced by IL-21 and Neutralization by Mouse IL-21 Antibody.</b> Recombinant Mouse IL-21 (Catalog # 594-ML) stimulates proliferation in the N1186 human T cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Mouse IL-21 (250 ng/mL) is neutralized (green line) by increasing concentrations of Mouse IL-21 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF594). The ND<sub>50</sub> is typically 5-15 µg/mL.</p>
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**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.2 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

Interleukin-21 (IL-21) and its receptor appear to play important roles in the regulation of the immune system. IL-21 is most related to IL-2, IL-4, and IL-15. IL-21 R, also called NILR (novel interleukin receptor), is a type I cytokine receptor with 4 conserved cysteine residues and an extracellular WSXWS motif. It is most closely related to IL-2 R $\beta$  and IL-4 R $\alpha$ . Mouse IL-21 is a 146 amino acid (aa) residue protein with a 24 aa signal peptide. Mouse and human IL-21 share 57% amino acid sequence identity. IL-21 is expressed by activated T cells. Although not fully elucidated, the IL-2 R $\gamma$  (V $_c$ ) chain appears to play a role in IL-21 R signaling. The IL-21/IL-21 R interaction appear to play important roles in B and T cell proliferation after antigen stimulation and NK cell maturation.

#### References:

1. Parrish-Novak, *et al.* (2000) *Nature* **408**:57.
2. Ozaki, K. *et al.* (2000) *PNAS* **97**:11439.
3. Dumoutier, L. *et al.* (2000) *Proc. Natl. Acad. Sci. USA* **97**:10144.
4. Asao, H. *et al.* (2001) *J. Immunol.* **167**:1.