

#### DESCRIPTION

<b>Species Reactivity</b>	Rat
<b>Specificity</b>	Detects rat IL-17F in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 716728
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant rat IL-17F Ala19-Ala153 Accession # NP_001015011
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

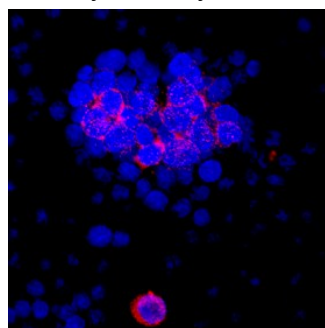
#### APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below
<b>Intracellular Staining by Flow Cytometry</b>	2.5 µg/10 <sup>6</sup> cells	See Below

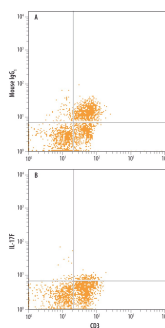
#### DATA

##### Immunocytochemistry



**IL-17F in Rat Splenocytes.** IL-17F was detected in immersion fixed Th17-differentiated rat splenocytes using Mouse Anti-Rat IL-17F Monoclonal Antibody (Catalog # MAB4437) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces and cytoplasm. View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

##### Intracellular Staining by Flow Cytometry



**Detection of IL-17F in Rat Splenocytes Stimulated to Induce Th17 Cells by Flow Cytometry.** Rat splenocytes were stimulated to induce Th17 cells with 10 µL/mL anti-CD3/anti-CD28, 20 ng/mL Recombinant Rat IL-2 (Catalog # 502-RL), 10 ng/mL Human TGF-β1 (Catalog # 100-B), 20 ng/mL Recombinant Rat IL-23 (Catalog # 3136-RL), 40 ng/mL Recombinant Rat IL-6 (Catalog # 506-RL), and 10 ng/mL Recombinant Rat IL-1β (Catalog # 501-RL) for 7 days with 50 ng/mL PMA, 200 ng/mL Ionomycin, and 3 µM Monensin added for the final 4 hours. Th17 cells were stained with Phycoerythrin-conjugated Anti-Rat CD3 and either (A) Mouse Anti-Rat IL-17F Monoclonal Antibody (Catalog # MAB4437) or (B) Mouse IgG<sub>2B</sub> Isotype Control (Catalog # MAB0041) followed by Alexa Fluor® 488-conjugated Anti-Mouse IgG Secondary Antibody. To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<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-17F (also ML-1) is a 19 kDa member of the IL-17 family of cytokines. Members of this family are involved in tissue homeostasis and demonstrate a structural motif termed a cysteine knot that characterizes a large superfamily of growth factors. Although most cysteine knot superfamily members use three intrachain disulfide bonds to create a knot, IL-17 family molecules generate the same structural form with only two disulfide links (1, 2, 3, 4). Based on mouse, mature rat IL-17F is 133 amino acids (aa) in length (5, 6). Rat IL-17F is a presumably secreted, 38 kDa glycosylated disulfide-linked homodimer. It is also secreted as a 35 kDa disulfide-linked heterodimer with IL-17/17A (7, 8). The heterodimeric form represents about 30% of secreted IL-17F. Initially, IL-17F was also reported as IL-24. Since that time, the IL-24 designation has been reassigned to MDA-7, a member of the IL-10 family of molecules (note: IL-17E is synonymous with IL-25). Mature rat IL-17F shares 59% and 90% aa sequence identity with mature human and mouse IL-17F, respectively; it also shares 55% aa identity with rat IL-17. Interspecies studies suggest rat IL-17F is produced by activated Th17-type CD4<sup>+</sup> T cells, mast cells, basophils and monocytes (1, 3, 9), and is inducible through the interaction of TGF- $\beta$ , IL-6 and IL-23 (9, 10, 11). Targets for IL-17F include respiratory epithelium, fibroblasts, macrophages and endothelial cells which produce proinflammatory cytokines such as GM-CSF, IL-6, IFN- $\gamma$ , IP-10, MIP-1 $\alpha$  and MCP-1 (2, 6, 12). This activity is found for both homodimeric and heterodimeric forms of IL-17F (7).

#### References:

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#### PRODUCT SPECIFIC NOTICES

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