

## DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse IL-22 in direct ELISAs and Western blots. In direct ELISAs, approximately 100% cross-reactivity with recombinant rat IL-22 is observed, 15% cross-reactivity with recombinant human IL-22 is observed, and no cross-reactivity with recombinant mouse IL-10 is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 140301
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant mouse IL-22 Leu34-Val179 Accession # Q9JJY9
<b>Conjugate</b>	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
<b>Formulation</b>	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

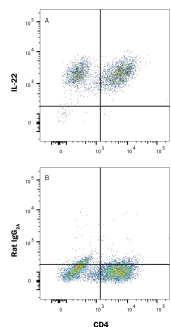
## APPLICATIONS

**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
<b>Intracellular Staining by Flow Cytometry</b>	10 $\mu$ L/10 <sup>6</sup> cells	See Below

## DATA

### Intracellular Staining by Flow Cytometry



**Detection of IL-22 in Mouse Th17 Splenocytes by Flow Cytometry.** Mouse splenocytes differentiated to Th17 cells with plate-bound Rat anti-Mouse CD3 $\epsilon$  monoclonal antibody (Catalog # [MAB484](#), 5  $\mu$ g/mL) plus Goat anti-Mouse CD28 (Catalog # [AF483](#), 5  $\mu$ g/mL), Recombinant Human TGF- $\beta$ 1 (Catalog # [240-B](#), 10 ng/mL) Recombinant Mouse IL-23 (Catalog # [1887-ML](#), 20 ng/mL), Recombinant Mouse IL-6 (Catalog # [406-ML](#), 40 ng/mL), Recombinant Mouse IL-1 $\beta$  (Catalog # [401-ML](#), 10 ng/mL), and Rat anti-Mouse IFN- $\gamma$  (Catalog # [MAB485](#), 10  $\mu$ g/mL) for 5 days were stained with APC-conjugated Rat anti-Mouse CD4 Monoclonal Antibody (Catalog # [FAB554A](#)) and (A) Rat Anti-Mouse IL-22 Fluorescein-conjugated Monoclonal Antibody (Catalog # [IC582F](#)) and (A) Rat Anti-Mouse IL-22 PE-conjugated Monoclonal Antibody (Catalog # [IC582P](#)) or (B) isotype control antibody (Catalog # [IC006P](#)). To facilitate intracellular staining, cells were fixed and permeabilized with FlowX FoxP3/Transcription Factor Fixation & Perm Buffer Kit. (Catalog # [FC012](#)). View our protocol for [Staining Intracellular Molecules](#).

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

## BACKGROUND

Interleukin-22 (IL-22), also known as IL-10-related T cell-derived inducible factor (IL-TIF) was initially identified as a gene induced by IL-9 in mouse T cells and mast cells. Mouse IL-22 cDNA encodes a 179 amino acid (aa) residue protein with a putative 33 aa signal peptide that is cleaved to generate a 146 aa mature protein that shares approximately 79% and 22% aa sequence identity with human IL-22 and IL-10, respectively. The mouse IL-22 gene is localized to chromosome 10. Although it exists as a single copy gene in many mouse strains, the IL-22 gene is duplicated in some mouse strains including C57B1/6, FVB and 129. The two mouse genes designated IL-TIF $\alpha$  and IL-TIF $\beta$ , share greater than 98% sequence homology in their coding region. IL-22 has been shown to activate STAT-1 and STAT-3 in several hepatoma cell lines and upregulate the production of acute phase proteins. IL-22 is produced by normal mouse T cells upon Con A activation. Mouse IL-22 expression is also induced in various organs upon lipopolysaccharide injection, suggesting that IL-22 may be involved in inflammatory responses. The functional IL-22 receptor complex consists of two receptor subunits, IL-22R (previously an orphan receptor named CRF2-9) and IL-10R $\beta$  (previously known as CRF2-4), belonging to the class II cytokine receptor family.

## References:

1. Dumoutier, L. *et al.* (2000) J. Immunol. **164**:1814.
2. Xie, M-H. *et al.* (2000) J. Biol. Chem. **275**:31335.
3. Dumoutier, L. *et al.* (2000) PNAS **97**:10144.
4. Kotenko, S.V. *et al.* (2001) J. Biol. Chem. **276**:2725.