

DESCRIPTION

Species Reactivity	Mouse
Specificity	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.
Source	Monoclonal Rat IgG _{2A} Clone # 140301
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse IL-22 Leu34-Val179 Accession # Q9JJY9
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL 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
Intracellular Staining by Flow Cytometry	0.25-1 µg/10 ⁶ cells	Mouse splenocytes treated with PMA, Ca ²⁺ ionomycin, recombinant human TGFβ ₁ , and recombinant mouse IL-6, fixed with paraformaldehyde and permeabilized with saponin

PREPARATION AND STORAGE

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

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 147 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-TIFα and IL-TIFβ, 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-10Rβ (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.

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