

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-17F in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse (rm) IL-17, rmlL-17B, C, D, E, or recombinant human IL-17F is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 316016
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse IL-17F Arg29-Ala161 Accession # Q7TNI7
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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 TGF-β (Catalog # 240-B), and Recombinant Mouse IL-6 (Catalog # 406-ML) fixed with paraformaldehyde and permeabilized with methanol and 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

The Interleukin 17 (IL-17) family proteins, comprised of six members (IL-17, IL-17B through IL-17F), are secreted, structurally related proteins that share a conserved cysteine-knot fold near the C-terminus, but have considerable sequence divergence at the N-terminus. With the exception of IL-17B, which exists as a non-covalently linked dimer, all IL-17 family members are disulfide-linked dimers. IL-17 family proteins are pro-inflammatory cytokines that induce local cytokine production and are involved in the regulation of immune functions (1, 2).

Mouse IL-17F cDNA encodes a 153 amino acid (aa) protein with a putative 20 aa signal peptide. Among IL-17 family members, IL-17F is most closely related to IL-17 sharing approximately 46% aa sequence identity. Mouse and human IL-17F share 55% sequence identity. IL-17F is expressed in activated CD4⁺ T cells and activated monocytes. Two receptors (IL-17 R, and IL-17B R), which are activated by IL-17 family members have been identified. In addition, at least three additional type I transmembrane receptors with homology to IL-17 R, including IL-17 RL (IL-17 RC), IL-17 RD, and IL-17 RE, have also been reported (1, 2, 5). The functions for IL-17 RC, D, and E are not known. Purified IL-17 R and IL-17B R do not bind IL-17F with high-affinity *in vitro*. However, binding of IL-17F is detected in cells transfected with IL-17 R, raising the possibility that a co-receptor may be required for IL-17F signaling through IL-17 R (4). The biological activities mediated by IL-17F are similar to those of IL-17. IL-17F stimulates production of IL-6, IL-8, G-CSF, and regulates cartilage matrix turnover by increasing matrix release and inhibiting new matrix synthesis (4). IL-17F also inhibits angiogenesis and induces production of IL-2, TGF-β, and monocyte chemoattractant protein-1 in endothelial cells (3).

References:

1. Aggarwal, S. and A.L. Gurney (2002) *J. Leukoc. Biol.* **71**:1.
2. Moseley, T.A. *et al.* (2003) *Cytokine & Growth Factor Rev.* **14**:155.
3. Starnes, T. *et al.* (2001) *J. Immunol.* **167**:4137.
4. Hurst, S.D. *et al.* (2002) *J. Immunol.* **169**:443.
5. Haudenschild, D. *et al.* (2002) *J. Biol. Chem.* **277**:4309.

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