

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-17F in ELISAs and Western blots. In sandwich immunoassays, less than 1% cross-reactivity recombinant human (rh) IL-17, rhIL-17B, rhIL-17C, rhIL-17D, rhIL-17E, and recombinant mouse IL-17F is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human IL-17F (R&D Systems, Catalog # 1335-IL) Arg31-Gln163 Accession # AAK83350
Formulation	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.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human IL-17F (Catalog # 1335-IL)
Immunocytochemistry	5-15 µg/mL	Immersion fixed human peripheral blood mononuclear cells treated with PMA and ionomycin.
Human IL-17F Sandwich Immunoassay		Reagent
ELISA Capture	0.2-0.8 µg/mL	Human IL-17F Antibody (Catalog # AF1335)
ELISA Detection	0.1-0.4 µg/mL	Human IL-17F Biotinylated Antibody (Catalog # BAF1335)
Standard		Recombinant Human IL-17F (Catalog # 1335-IL)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month from date of receipt, 2 to 8 °C, reconstituted. ● 6 months from date of receipt, -20 to -70 °C, reconstituted.

BACKGROUND

The Interleukin 17 (IL-17) family proteins, comprising six members (IL-17A 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).

Human IL-17F cDNA encodes a 163 aa protein with a putative 30 aa signal peptide. Among IL-17 family members, IL-17F is most closely related to IL-17A (approximately 44% aa sequence homology), but shares only limited sequence homology (16 - 30%) with IL-17B, C, D and E. Human and mouse IL-17F share 55% sequence identity. IL-17F is expressed in activated CD4+ T-cells and activated monocytes. Five receptors (IL-17 RA, B, C, D and E) have been identified (5). Although the ligands for IL-17 RD and E are not known yet, it is reported that IL-17 RA binds IL-17A, and IL-17 RB binds IL-17B and IL-17E. IL-17 RC binds IL-17A and IL-17F with similarly high affinity and functions as a receptor for both IL-17A and IL-17F (5, 6). 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. Shen, F. & S. L. Gaffen (2008) *Cytokine* **41**:92.
5. Kuestner, R.E. *et al.* (2007) *J. Immunol.* **179**:5462.