

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-17D in direct ELISAs and Western blots. In direct ELISAs and Western blots, this antibody does not cross-react with recombinant human (rh) IL-17, rhIL-17B, rhIL-17C, rhIL-17E, or rhIL-17F.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 246002
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human IL-17D Ala18-Pro202 Accession # Q8TAD2.1
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

## 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>Western Blot</b>	1 µg/mL	Recombinant Human IL-17D (Catalog # 1504-IL) under non-reducing conditions only
<b>Human IL-17D Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	2-8 µg/mL	Human IL-17D Antibody (Catalog # MAB1504)
<b>ELISA Detection</b>	0.1-0.4 µg/mL	Human IL-17D Biotinylated Antibody (Catalog # BAF1504)
<b>Standard</b>		Recombinant Human IL-17D (Catalog # 1504-IL)
<b>Blockade of Receptor-ligand Interaction</b>	In a functional ELISA, 3-9 µg/mL of this antibody will block 50% of the binding of 2.5 µg/mL of biotinylated Recombinant Human IL-17B R Fc Chimera to immobilized Recombinant Human IL-17D (Catalog # 1504-IL) coated at 200 ng/mL (100 µL/well). At 100 µg/mL, this antibody will block >90% of the binding.	

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<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

The Interleukin-17 (IL-17) family proteins, comprising 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 (1, 2). With the exception of IL-17B, which exists as a non-covalently linked dimer, all IL-17 family members are disulfide-linked dimers (3). IL-17 family proteins are pro-inflammatory cytokines that induce local cytokine production and are involved in the regulation of immune functions (1, 2). 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 orphan 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 (1-4). The functions of IL-17 RC, D, and E are not known. Human IL-17D cDNA encodes a 202 amino acid (aa) residues protein with a putative 17 aa signal peptide (5). Human and mouse IL-17D share 78% sequence identity. Among IL-17 family members, IL-17D is most closely related to IL-17B, sharing 27% aa sequence homology (5, 6). IL-17D is expressed preferentially in skeletal muscle, heart, adipose tissue, lung, pancreas, and nervous system (1, 5). Like other IL-17 family members, IL-17D modulates immune responses indirectly by stimulating the production of myeloid growth factors and chemokines including IL-6, IL-8, and GM-CSF (5). IL-17D has also been shown to suppress the proliferation of myeloid progenitors in colony formation assays. The receptor of IL-17D has not yet been identified. However, stimulation of IL-8 production by IL-17D is mediated through the activation of nuclear factor kappa-B (5). The IL-17D preparations from R&D Systems have been found to bind immobilized recombinant IL17B R/Fc in a functional ELISA.

## 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. Hymowitz, S.G. *et al.* (2001) *EMBO J.* **20**:5332.
4. Haudenschild, D. *et al.* (2002) *J. Biol. Chem.* **277**:4309.
5. Starnes, T. *et al.* (2002) *J. Immunol.* **169**:642.
6. Li, H. *et al.* (2000) *Proc. Natl. Acad. Sci. USA* **97**:773.