Revision 1

Store at -20C

#13186

IL-17F (D3M4D) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, FC-FP	M	Endogenous	18	Rabbit IgG	#Q7TNI7	257630

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Flow Cytometry (Fixed/Permeabilized)	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

IL-17F (D3M4D) Rabbit mAb recognizes endogenous levels of total mouse IL-17F protein.

Species predicted to react based on 100% sequence homology

Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser93 of mouse IL-17F protein.

Background

The IL-17 family of cytokines consists of IL-17A-F, and their receptors include IL-17RA-RE (1). IL-17 cytokines are produced by a variety of cell types including the Th17 subset of CD4+ T cells, as well as subsets of γδ T cells, NK cells, and NKT cells (2). IL-17A and IL-17F, the most well-studied of the IL-17 cytokines, contribute to fungal and bacterial immunity by inducing expression of proinflammatory cytokines, chemokines, and antimicrobial peptides (2). In addition, IL-17A contributes to the pathogenesis of several autoimmune diseases (3). IL-17E promotes Th2 cell responses (4). The roles of IL-17B, IL-17C, and IL-17D are less clear, however these family members also appear to have the capacity to induce proinflammatory cytokines (1,5,6). IL-17 receptors have an extracellular domain, a transmembrane domain, and a SEFIR domain. They are believed to signal as homodimers, heterodimers, or multimers through their SEFIR domain by recruiting the SEFIR domain-containing adaptor Act1 (7). Unlike most cytokines that signal through Jak/STAT pathways, IL-17 signaling results in NF-κB activation (8).
IL-17F is a cysteine-linked proinflammatory cytokine that can dimerize with itself or form heterodimers with the IL-17 family member that it shares 50% homology with, IL-17A (9). Although mainly produced by Th17 cells, IL-17F expression has been observed in several cell types including activated CD8+ T cells, γδ T cells, NKT cells, B cells and LTi cells. IL-17F binds to a heterodimeric receptor consisting of IL-17RA and IL-17RC, which upon binding induces the TRAF6-mediated activation of TAK and the Erk1/2 MAP kinase pathway (10). This induces the expression of numerous inflammatory chemokines and cytokines including IL-1β, IL-6, IL-8, and MIP-1β along with increased adhesion molecule expression in human airway epithelial cells, vein endothelial cells, and fibroblasts (11). IL-17F has been linked with asthma and other autoimmune diseases including rheumatoid arthritis, multiple sclerosis, psoriasis, and inflammatory bowel disease (12).

Background References

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3. Hu, Y. et al. (2011) *Ann N Y Acad Sci* 1217, 60-76.
4. Fort, M.M. et al. (2001) *Immunity* 15, 985-95.
5. Yamaguchi, Y. et al. (2007) *J Immunol* 179, 7128-36.
6. Li, H. et al. (2000) *Proc Natl Acad Sci U S A* 97, 773-8.
7. Chang, S.H. et al. (2006) *J Biol Chem* 281, 35603-7.
8. Shalom-Barak, T. et al. (1998) *J Biol Chem* 273, 27467-73.
9. Liang, S.C. et al. (2007) *J Immunol* 179, 7791-9.
10. Chang, S.H. and Dong, C. (2007) *Cell Res* 17, 435-40.
11. Hizawa, N. et al. (2006) *Clin Exp Allergy* 36, 1109-14.
12. Isailovic, N. et al. (2015) *J Autoimmun* 60, 1-11.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

M: Mouse

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