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Anti- IL-17F Monoclonal Antibody

Catalog # ABO15021

Product Information

Application	IHC-P
Primary Accession	Q7TNI7
Host	Mouse
Isotype	Mouse IgG1, κ
Reactivity	Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti- IL-17F Monoclonal Antibody . Tested in IHC-P applications. This antibody reacts with Mouse.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500 □/ml.

Additional Information

Gene ID	257630
Other Names	Interleukin-17F, IL-17F, Il17f
Calculated MW	17941
Application Details	Immunohistochemistry (Paraffin-embedded Section), 2-5 □g/ml, Mouse
Source	Eukaryota
Protein Name	Interleukin-17F
Contents	PBS, pH 7.0. Contains no stabilizers or preservatives
Clone Names	Clone: AFIC-9
Immunogen	Mouse IL-17F
Purification	Immunogen affinity purified.
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	Il17f
Function	Effector cytokine of innate and adaptive immune system involved in antimicrobial host defense and maintenance of tissue integrity

(PubMed:18025225, PubMed:19144317, PubMed:23255360). IL17A- IL17F signals via IL17RA-IL17RC heterodimeric receptor complex, triggering homotypic interaction of IL17RA and IL17RC chains with TRAF3IP2 adapter through SEFIR domains. This leads to downstream TRAF6- mediated activation of NF-kappa-B and MAPkinase pathways ultimately resulting in transcriptional activation of cytokines, chemokines, antimicrobial peptides and matrix metalloproteinases, with potential strong immune inflammation (PubMed:15477493, PubMed:17911633, PubMed:18025225). IL17A-IL17F is primarily involved in host defense against extracellular bacteria and fungi by inducing neutrophilic inflammation (PubMed:18025225, PubMed:23255360). As signature effector cytokine of T-helper 17 cells (Th17), primarily induces neutrophil activation and recruitment at infection and inflammatory sites (PubMed:18025225). Stimulates the production of antimicrobial beta-defensins DEFB1, DEFB103A, and DEFB104A by mucosal epithelial cells, limiting the entry of microbes through the epithelial barriers (PubMed:19144317). IL17F homodimer can signal via IL17RC homodimeric receptor complex, triggering downstream activation of TRAF6 and NF-kappa-B signaling pathway (PubMed:28813677). Via IL17RC induces transcriptional activation of IL33, a potent cytokine that stimulates group 2 innate lymphoid cells and adaptive T-helper 2 cells involved in pulmonary allergic response to fungi (PubMed:28813677). Likely via IL17RC, promotes sympathetic innervation of peripheral organs by coordinating the communication between gamma-delta T cells and parenchymal cells. Stimulates sympathetic innervation of thermogenic adipose tissue by driving TGFB1 expression (PubMed:32076265). Regulates the composition of intestinal microbiota and immune tolerance by inducing antimicrobial proteins that specifically control the growth of commensal Firmicutes and Bacteroidetes (PubMed:29915298).

Cellular Location Secreted.

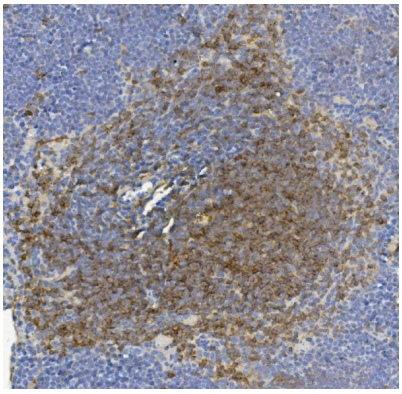
Tissue Location Expressed by T-helper 17 cells (Th17) (at protein level). The expression pattern reflects the differentiation state. In fully differentiated Th17 cells, IL17A-IL17F heterodimers are produced at higher levels than IL17A-IL17A and IL17F-IL17F dimers (PubMed:18025225). Dominantly secreted in intestine (PubMed:29915298) Expressed by resident cells of the lamina propria, both epithelial cells and immune cell subsets including natural killer cells, dendritic cells, macrophages and various T and B cell subsets (PubMed:16990136, PubMed:29915298). Expressed by epithelial cells and innate immune cells in the colon (PubMed:19144317). Expressed in group 3 innate lymphoid cells (PubMed:23255360, PubMed:29915298).

Background

Interleukin 17F, also called IL17F is involved in the regulation of normal versus aberrant T-cell responses. This gene is mapped to 6p12.2. The protein encoded by this gene is a cytokine that shares sequence similarity with IL17. This cytokine is expressed by activated T cells, and has been shown to stimulate the production of several other cytokines, including IL6, IL8, and CSF2/GM_CSF. This cytokine is also found to inhibit the angiogenesis of endothelial cells and induce endothelial cells to produce IL2, TGFB1/TGFB, and monocyte chemoattractant protein-1. It is suggested that targeting IL17 and IL17F or antagonizing IL17R might mitigate neutrophil-mediated inflammation in CF.

Images

Figure 1. IHC analysis of IL-17F using anti-IL-17F antibody (M02062).
IL-17F was detected in paraffin-embedded section of



mouse spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 µg/ml mouse anti-IL-17F Antibody (M02062) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

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