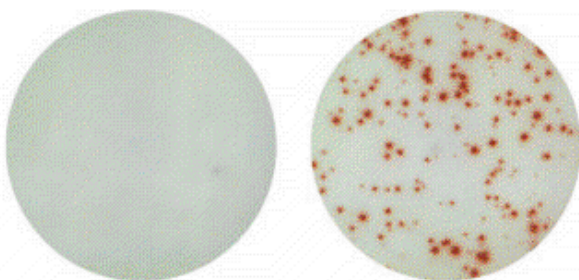


Anti-Human IL-17A Functional Grade Purified

Catalog Number: 16-7178

Also Known As: Interleukin-17A, IL17A

RUO: For Research Use Only. Not for use in diagnostic procedures.



Human IL-17A ELISPOT Assay. Left: Normal human peripheral blood cells cultured for 24 hrs (no mitogen). Right: Normal human peripheral blood cells activated with PMA/Ionomycin for 24 hrs.

Product Information

Contents: Anti-Human IL-17A Functional Grade Purified

REF **Catalog Number:** 16-7178

Clone: eBio64CAP17

Concentration: 1 mg/mL

Host/Isotype: Mouse IgG1, kappa

Handling Conditions: Use in sterile environment.

Endotoxin Level: Less than 0.001 ng/ug antibody, as determined by the LAL assay.

Formulation: aqueous buffer, no sodium azide



Temperature Limitation: Store at 2-8°C.



Batch Code: Refer to Vial



Use By: Refer to Vial

Description

The eBio64CAP17 antibody reacts with human IL-17A; the antibody has been reported to cross react with Rhesus monkey IL-17A, as verified by intracellular staining experiments. The eBio64CAP17 antibody is a neutralizing antibody. Reactivity of the eBio64CAP17 antibody with other IL-17 family members has not been evaluated. Interleukin-17A (IL-17A) is a CD4+ T cell-derived cytokine that promotes inflammatory responses in cell lines and is elevated in rheumatoid arthritis, asthma, multiple sclerosis, psoriasis, and transplant rejection. The cDNA encoding human IL-17A was isolated from a library of CD4+ T cells; the encoded protein exhibits 72 percent amino acid identity with HVS13, an open reading frame from a T lymphotropic Herpesvirus saimiri, and 63 percent with mouse CTLA-8 (cytotoxic T-lymphocyte associated antigen-8). Human IL-17A exists as glycosylated 20-30 kD homodimers. High levels of IL-17A homodimer are produced by activated peripheral blood CD4+ T-cells. IL-17A enhances expression of the intracellular adhesion molecule-1 (ICAM-1) in human fibroblasts. Human IL-17A also stimulates epithelial, endothelial, or fibroblastic cells to secrete IL-6, IL-8, G-CSF, and PGE2. In the presence of human IL-17A, fibroblasts can sustain the proliferation of CD34+ hematopoietic progenitors and induce maturation into neutrophils. Mouse, rat, and human IL-17A can induce IL-6 secretion in mouse stromal cells, indicating that all homologs can recognize the mouse IL-17A receptor.

IL-23-dependent, IL-17A-producing CD4+ T cells (Th-17 cells) have been identified as a unique subset of Th cells that develops along a pathway that is distinct from the Th1- and Th2- cell differentiation pathways. The hallmark effector molecules of Th1 and Th2 cells, e.g., IFN- γ and IL-4, have each been found to negatively regulate the generation of these Th-17 cells.

Additionally, activated human CD4+ T cells have been found to produce the IL-17A/F heterodimer, as well as the corresponding homodimers. In comparing the relative potency of IL-17A, IL-17F, and IL-17A/F, all three were found to induce GRO- α secretion; IL-17A was most potent, followed by IL-17A/F heterodimer, then IL-17F (100fold lower than IL-17A). eBio64CAP17 can be used to detect IL-17 heterodimers by immunoprecipitation followed by immunoblot with H17F10A7 anti-IL17F monoclonal antibody.

The eBio64CAP17 has been shown to react to rhesus and marmoset primates.

Applications Reported

The eBio64CAP17 antibody has been reported for use as the capture antibody in a human IL-17A ELISA and ELISPOT assay, for neutralization of IL-17A bioactivity, and for intracellular staining of IL-17A-producing cells.

Applications Tested

The Affinity Purified eBio64CAP17 antibody has been tested as the capture antibody in a sandwich ELISA for measurement of human IL-17A protein levels, in combination with the biotinylated eBio64DEC17 antibody (13-7179) for detection and recombinant human IL-17A (14-8179) as the standard. A suitable range of concentrations of this antibody for ELISA capture is 0.5 – 2.0 μ g/mL. A standard curve consisting of doubling dilutions of the recombinant standard over the range of 1000 pg/mL - 8 pg/mL should be included in each ELISA plate.

The Functional Grade Purified eBio64CAP17 antibody has been tested by LAL assay to verify lowest endotoxin levels and has been tested for neutralization of IL-17A bioactivity and for ELISPOT capture. For in vitro neutralization, the eBio64CAP17 antibody at less than or equal to 63 ng/ml has been found to neutralize by 50% the biological effect of 5 ng/ml human IL-17A, based on induction of IL-6 secretion by the NHDF cell line. Detailed information and protocols about cytokine bioassays and in vitro cytokine neutralization using antibodies can be found in the BestProtocols® section.

It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

References

Kap YS, van Meurs M, van Driel N, Koopman G, Melief MJ, Brok HP, Laman JD, 't Hart BA. A monoclonal antibody selection for immunohistochemical examination of lymphoid tissues from non-human primates. *J Histochem Cytochem.* 2009 Dec;57(12):1159-67. (eBio64CAP17, IHC frozen on rhesus and marmoset primates, PubMed)

Related Products

13-7179 Anti-Human IL-17A Biotin (eBio64DEC17)

14-8171 Mouse IL-17A Recombinant Protein

14-8239 Human IL-23 Recombinant Protein

88-7976 Human IL-17A (Interleukin-17A, IL17A) ELISA Ready-SET-Go! Kit (See replacement item BMS2017)

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