Human IL-17/IL-17A Antibody

Monoclonal Mouse IgG_{2A} Clone # 1019404

Catalog Number: MAB31711

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-17A and human IL-17A/IL-17F heterodimer in direct ELISAs.
Source	Monoclonal Mouse IgG_{2A} Clone # 1019404
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese Hamster Ovary cell line CHO-derived Human IL17A (Gly24Ala155) Accession # Q16552 Human IL17F (Arg31Gln163) Accession # Q96PD4
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

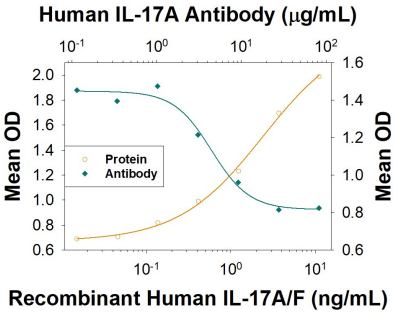
APPLICATIONS

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.*

Neutralization	Measured by its ability to neutralize IL-17A/F heterodimer-induced IL-6 secretion in the NIH-3T3 mouse embryonic fibroblast cell line. The Neutralization Dose (ND_{50}) is typically 1-6 µg/mL in the presence of 10 ng/mL Recombinant Human IL-17A/F Heterodimer and 0.5 ng/mL Recombinant Mouse TNF- α.

DATA

Neutralization



IL-6 Secretion Induced by IL-17A/F Heterodimer and Neutralization by Human IL-17A Antibody. Recombinant Human IL-17A/F Heterodimer (Catalog # 5837-IL), the the presence of Recombinant Mouse TNF-α (0.5 ng/mL, Catalog # 410-MT), stimulates IL-6 secretion in the NIH-3T3 mouse embryonic fibroblast cell line in a dose-dependent manner (orange line), as measured by the Mouse IL-6 Quantikine ELISA Kit (Catalog # M6000B). IL-6 secretion elicited by Recombinant Human IL-17A/F Heterodimer (10 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human IL-17A Monoclonal Antibody (Catalog # MAB31711). The ND_{50} is typically 1-6 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

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BACKGROUND

Human IL-17A/F is an approximately 40 kDa, secreted, disulfide-linked heterodimeric glycoprotein comprised of two members of the IL-17 family of cytokines, IL-17A and IL-17F (1, 2). Members of this family demonstrate a structural motif termed a cysteine knot that also characterizes a large superfamily of growth factors. Although most cysteine knot superfamily members use three intrachain disulfide bonds to create a knot, IL-17 family molecules generate the same structural form with only two disulfide links (3-5). Mature human IL-17A and IL-17F share 61% and 56% amino acid sequence identity with mouse IL-17A and IL-17F, respectively. They share 50% aa sequence identity with each other. IL-17A/F and the IL-17A and IL-17F homodimers are produced by IL-23 activated Th17 cells (1, 6-10). The widely expressed receptors IL-17 RA and IL-17 RC form a heterodimer for the binding of IL-17A and IL-17F, as well as the heterodimeric IL-17A/F (6, 11, 12). IL-17A/F is a biologically active protein that induces chemokine production and airway neutrophilia with intermediate potency between IL-17A (most potent) and IL-17F (least potent) (7, 12). It is up-regulated in immune cells during inflammatory arthritis and contributes to disease severity (13).

References:

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