

DESCRIPTION

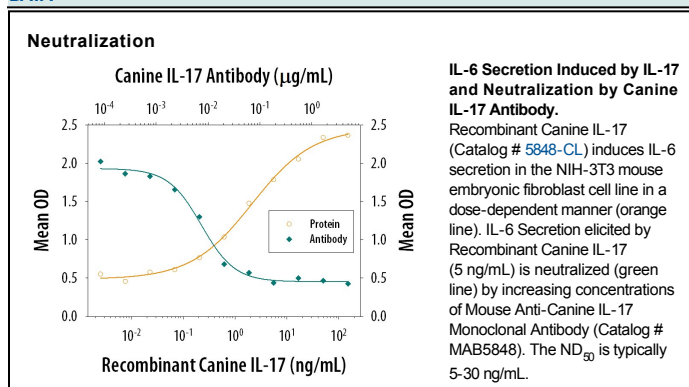
Species Reactivity	Canine
Specificity	Detects canine IL-17 in direct ELISAs. In direct ELISAs, approximately 25% cross-reactivity with recombinant human (rh) IL-17A is observed and no cross-reactivity with rhIL-17F or recombinant mouse IL-17A is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 665909
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant canine IL-17 Gly26-Ala155 Accession # NP_001159350
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 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-17-induced IL-6 secretion in the NIH-3T3 mouse embryonic fibroblast cell line. Yao, Z. et al. (1995) <i>Immunity</i> 3:811. The Neutralization Dose (ND ₅₀) is typically 5-30 ng/mL in the presence of 5 ng/mL Recombinant Canine IL-17.
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DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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. <ul style="list-style-type: none"> • 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.

BACKGROUND

Interleukin 17 (IL-17; also IL-17A and CTLA-8) is a 17 kDa member of the IL-17 family of cytokines (1). Members of this family demonstrate a structural motif termed a cysteine knot which characterize 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 (2-4). Based on the amino acid (aa) sequence alignment with human IL-17, canine IL-17 is 130 aa in length. It is secreted as a 35 kDa disulfide-linked homodimer and as a 40 kDa disulfide-linked heterodimer with IL-17F (5). Canine IL-17 is 81% identical on the aa level to human IL-17. IL-23 drives Th17 lymphocytes to produce IL-17 (6-8). IL-17's production has also been demonstrated in $\gamma\delta$ T cells (9), CD8⁺ memory T cells (10-11), eosinophils (12), neutrophils (10), and monocytes (13). Studies have identified that the widely expressed receptors IL-17RA and IL-17RC form a heterodimer for the binding of IL-17 (6, 14-15). The predominant function of IL-17 is thought to be as a proinflammatory mediator through a variety of mechanisms (16). Locally, IL-17 stimulates production of IL-6, prostaglandin E and nitric oxide (16-19), and synergy with other inflammatory cytokines such as TNF- α , IL-1 β and IFN- γ leads to up-regulation of gene expression and progression and amplification of local inflammation (16, 20-22). IL-17 also mediates chemotaxis of neutrophils and monocytes to sites of inflammation through the chemoattractant mediators IL-8, GRO- α , and MCP-1 (16, 22-25) while augmenting production of hematopoietic growth factors, such as G-CSF and GM-CSF (16, 26, 27), which promote the growth and maturation of the recruited myeloid cells. In addition, IL-17 serves as a bridge between innate and adaptive immune responses by enhancing the induction of co-stimulatory molecules such as ICAM-1 and other cytokines (16, 22, 28), thereby supporting T cell activation. IL-17 expression has been associated with many inflammatory diseases, such as rheumatoid arthritis, multiple sclerosis, asthma, systemic lupus erythematosus and allograft rejection (15).

References:

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