Biotinylated Recombinant Human IL-17/IL-17A

Catalog Number: BT7955/CF

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived Gly24-Ala155 Accession # Q16552
N-terminal Sequence Analysis	Gly24
Structure / Form	Disulfide-linked homodimer, Biotinylated via sugars
Predicted Molecular Mass	15 kDa (unlabeled)

SPECIFICATIONS

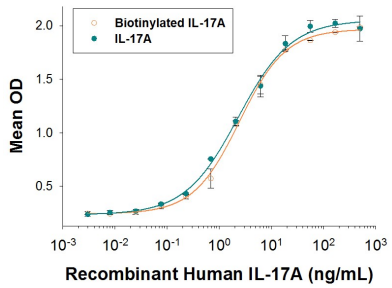
SDS-PAGE	14-23 kDa, reducing conditions
Activity	Measured by its ability to induce IL-6 secretion by NIH-3T3 mouse embryonic fibroblast cells. Yao, Z. *et al.* (1995) Immunity **3**:811. The ED_{50} for this effect is 1.5-7.5 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS and NaCl. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



Both Biotinylated Recombinant Human IL-17A (Catalog # BT7955/CF) and unlabeled Recombinant Human IL-17A (Catalog # 7955-IL/CF) induces IL-6 secretion by NIH-3T3 mouse embryonic fibroblast cells. The ED_{50} for this effect is 1.5-7.5 ng/mL. The similarity in activity highlights that the biotinylated protein is fully functional.

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BACKGROUND

Interleukin-17A (IL-17A), also known as CTLA-8, is a 15-20 kDa glycosylated cytokine that plays an important role in anti-microbial and chronic inflammation. The six IL-17 cytokines (IL-17A-F) are encoded by separate genes but adopt a conserved cystine knot fold (1, 2). Mature human IL-17A shares 60% amino acid sequence identity with mouse and rat IL-17A (3, 4). IL-17A is secreted by Th17 cells, γ/δ T cells, iNKT cells, NK cells, LTi cells, neutrophils, and intestinal Paneth cells (2). It forms disulfide-linked homodimers as well as disulfide-linked heterodimers with IL-17F (5, 6). IL-17A exerts its effects through the transmembrane IL-17RA in complex with IL-17RC or IL-17RD (7, 8). Both IL-17RA and IL-17RC are required for responsiveness to heterodimeric IL-17A/F (7). IL-17A promotes protective mucosal and epidermal inflammation in response to microbial infection (9-12). It induces chemokine production, neutrophil influx, and the production of antibacterial peptides (9-11). IL-17A/F likewise induces neutrophil migration, but IL-17F does not (11). IL-17A additionally enhances the production of inflammatory mediators by rheumatoid synovial fibroblasts and contributes to TNF-α induced shock (4, 13). In contrast, it can protect against the progression of colitis by limiting chronic inflammation (12). IL-17A encourages the formation of autoreactive germinal centers and exacerbates the onset and progression of experimental models of autoimmunity (14, 15). IL-17A has been shown to exert either tumorigenic or anti-tumor effects (16, 17).

References:

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