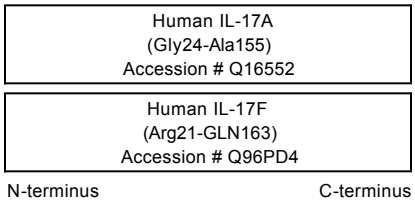
Biotinylated Recombinant Human IL-17A/F Heterodimer

Catalog Number: BT5837

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived



N-terminal Sequence Analysis	Gly24(IL-17A) & Arg21(IL-17F)
Structure / Form	Disulfide-linked heterodimer, Biotinylated via sugars
Predicted Molecular Mass	15 kDa (unlabeled IL-17A), 15 kDa (unlabeled IL-17F)

SPECIFICATIONS

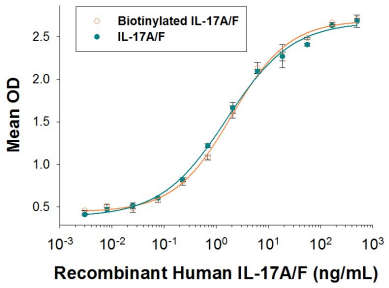
Activity	Measured by its ability to induce IL-6 secretion by NIH-3T3 mouse embryonic fibroblast cells. The ED_{50} for this effect is 0.4-2 ng/mL.
Endotoxin Level	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in HCl with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in 4 mM HCl containing at least 0.1% human or bovine serum albumin
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/F (Catalog # BT5837) and unlabeled Recombinant Human IL-17A/F Heterodimer (Catalog # 5837-IL) induces IL-6 secretion by NIH-3T3 mouse embryonic fibroblast cells. The ED_{50} for this effect is 0.4-2 ng/mL. The similarity in activity highlights that the biotinylated protein is fully functional.

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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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