

DESCRIPTION

Source	<i>E. coli</i> -derived	
	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> Mouse IL-17A (Thr22 - Ala158) Accession # Q62386 </div>	
	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> Mouse IL-17F (Arg21 - Ala153, with an N-terminal Met) Accession # AAM77568 </div>	
	N-terminus	C-terminus

N-terminal Sequence Analysis	Thr22 (IL-17A) & Met (IL-17F)
Structure / Form	Disulfide-linked heterodimer
Predicted Molecular Mass	14.9 kDa (IL-17A) & 15.5 kDa (IL-17F), reducing conditions

SPECIFICATIONS

Activity	Measured by its ability to induce IL-6 secretion by NIH-3T3 mouse embryonic fibroblast cells. Yao, Z. <i>et al.</i> (1995) <i>Immunity</i> 3 :811. The ED ₅₀ for this effect is 0.075-0.375 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in Acetonitrile and TFA. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in 4 mM HCl.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

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). 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 (2 - 4). Mouse IL-17A is synthesized as a 158 amino acid (aa) precursor that contains a 25 aa signal sequence and a 133 aa mature region. The mature chain contains one potential site of N-linked glycosylation. Mouse IL-17F is synthesized as a 161 aa precursor. Like IL-17A, IL-17F contains one potential site of N-linked glycosylation. IL-17A and IL-17F share 50% aa sequence identity. Mouse IL-17A and IL-17F are 61% and 56% identical to human IL-17A and IL-17F on the aa level, respectively. IL-17A/F and the IL-17A and IL-17F homodimers are produced by an activated subset of CD4⁺ T cells, termed Th17 (1, 5 - 7). IL-23 drives Th17 lymphocytes to produce these cytokines (5, 8 - 9). Studies have identified that the widely expressed receptors IL-17RA and IL-17RC form a heterodimer for the binding of IL-17A and IL-17F, and IL-17A/F (5, 10 - 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) (6).

References:

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