

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived	
	Rat IL-17A (Ala18-Ser150 (Ile46Leu)) Accession # Q61453	
	Rat IL-17F (Arg29-Ala161) Accession # Q5BJ95	
	N-terminus	C-terminus

N-terminal Sequence Analysis Ala18 (IL-17A) & Arg29 (IL-17F)

Structure / Form Disulfide-linked heterodimer

Predicted Molecular Mass 15 kDa (IL-17A) & 15 kDa (IL-17F)

SPECIFICATIONS

SDS-PAGE 12-30 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 ED₅₀ for this effect is 3-18 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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

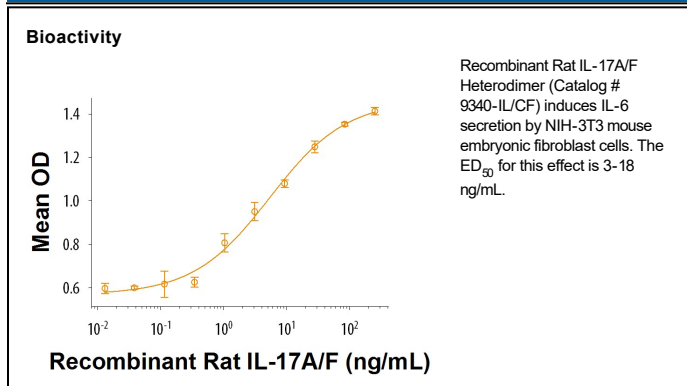
Reconstitution Reconstitute at 200 µg/mL in PBS.

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



BACKGROUND

Rat IL-17A/F is an approximately 37 kDa, secreted, disulfide-linked glycosylated heterodimeric protein 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 such as TGF-beta (1). 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 (1, 3-5). Mature rat IL-17A and IL-17F share 60% and 59% amino acid sequence identity with human and 61% and 90% with mouse IL-17A and IL-17F, respectively. They also share 50% aa sequence identity with each other (1). IL-17A/F heterodimer and the IL-17A and IL-17F homodimers are produced by IL-23 activated Th17 cells (1, 6-10, 14). 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:

1. Wright, J.F. *et al.* (2007) *J. Biol. Chem.* **282**:13447.
2. Chang, S.H. and C. Dong (2007) *Cell Res.* **17**:435.
3. Kawaguchi, M. *et al.* (2004) *J. Allergy Clin. Immunol.* **114**:1265.
4. Kolls, J.K. and A. Linden (2004) *Immunity* **21**:467.
5. Gu, C. *et al.* (2013) *Cytokine* **64**:477.
6. Cheung, P.F.Y. *et al.* (2008) *J. Immunol.* **180**:5625.
7. Liang, S.C. *et al.* (2007) *J. Immunol.* **179**:7791.
8. Ouyang, W. *et al.* (2008) *Immunity* **28**:454.
9. Steinman, L. (2007) *Nat. Med.* **13**:139.
10. Hunter, C.A. (2005) *Nat. Rev. Immunol.* **5**:521.
11. Kuestner, R.E. *et al.* (2007) *J. Immunol.* **179**:5462.
12. Wright, J.F. *et al.* (2008) *J. Immunol.* **181**:2799.
13. Sarkar, S. *et al.* (2014) *Clin. Exp. Immunol.* **177**:652.
14. Spolski, R. *et al.* (2009) *Eur. J. Immunol.* **39**:658.