**DESCRIPTION**

| Source       | E. coli-derived  
|             | Thr22-Ala158  
| Accession # | Q62386.1 |

**N-terminal Sequence Analysis**

| Structure / Form | Disulfide-linked homodimer  

**Predicted Molecular Mass**

| 15.5 kDa (monomer)  

**SPECIFICATIONS**

| 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 0.25-1.25 ng/mL. |
| Endotoxin Level | <0.10 EU per 1 μg of the protein by the LAL method. |
| Purity | >97%, by SDS-PAGE under reducing conditions and visualized by silver stain. |
| Formulation | Lyophilized from a 0.2 μm filtered solution in Acetonitrile and TFA with BSA as a carrier protein. See Certificate of Analysis for details. |

**PREPARATION AND STORAGE**

| Reconstitution | Reconstitute at 25 μg/mL in sterile 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**

- 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**

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 mouse IL-17A shares 61% and 89% amino acid sequence identity with human and rat IL-17A, respectively (3, 4). IL-17A is secreted by Th17 cells, γδ 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 (Fossiez, 14). 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 (15, 16). IL-17A has been shown to exert either tumorigenic or anti-tumor effects (17, 18).

**References:**