

## CERTIFICATE OF ANALYSIS

### Product Information

Product Name: TNF- $\alpha$ , Human

Cat. No.: Z02682-10, Z02682-50, Z02682-1

Lot No.: P50011706

Size: 10  $\mu$ g/vial; 50  $\mu$ g/vial; 1 mg/vial

Storage Condition: Lyophilized recombinant Human TNF- $\alpha$  remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, recombinant Human TNF- $\alpha$  remains stable up to 2 weeks at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

### Quality Control

Test Items	Specifications	Results
Physical Appearance	White Freeze-dried Powder	Conformed
Purity (SDS-PAGE & HPLC)	> 95%	Conformed
Biological Activity (EC <sub>50</sub> )	< 0.08ng/ml	15 pg/mL
Molecular Weight	17.4 kDa	Conformed
Bacterial Endotoxin	< 0.2 EU/ $\mu$ g	Conformed

### Caution:

For laboratory use only. Not for household use. If you have any questions about the Certificate of Analysis, please contact our customer service representative at 1-877-436-7274 (Toll-Free), or 1-732-885-9188.

Certified by: Joe Wang Date: 06/01/2017

Protein Products Department