

## CERTIFICATE OF ANALYSIS

### Product Information

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Product Name:	Tumor Necrosis Factor-Alpha (TNF-Alpha), Rat
Cat. No.:	Z02999-10; Z02999-50; Z02999-1
Lot No.:	P20011211
Size:	10 µg/vial; 50 µg/vial; 1mg/vial
Storage Condition:	Lyophilized recombinant Rat Tumor Necrosis Factor-Alpha (rrTNF-Alpha) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rrTNF-Alpha should be stable up to 2 weeks at 4°C or up to 3 months at -20°C.

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### Quality Control

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Test Items	Specifications	Results
Physical Appearance	White Freeze-dried Powder	Conformed
Purity (SDS-PAGE)	> 95%	Conformed
Purity (HPLC)	> 95%	Conformed
Activity(ED <sub>50</sub> )	< 50 pg/ml	14 pg/ml
Molecular Weight	17.4±1.7kDa	Conformed
Bacterial Endotoxin	< 0.2 EU/µg	Conformed

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### 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:  Date: 01/09/2013

Protein Department