

**CERTIFICATE OF ANALYSIS**

PRODUCT: Recombinant Human Tumor Necrosis Factor, His FOR RESEARCH  
BATCH NO.: Lot specific MANUFACTURING DATE: Lot specific  
SIZE: All pack sizes RETEST DATE: Lot specific  
TEST BASIS: ENTERPRISE STANDARD  
CATALOG #: 1130-01H

Item	Standard	Result
Characteristics	White Freeze-dried Powder	Conformed
pH	7.0±0.5	7.02
SDS-PAGE Electrophoresis Purity	>97%	Conformed
HPLC Purity	>97%	97.56%
Specific Biological Activity	>2.0×10 <sup>7</sup> IU/mg ED <sub>50</sub> (L929) = <0.05 ng/ml	2.35×10 <sup>7</sup> IU/mg Conformed
Molecular Weight	18.3±1.8 KDa	Conformed
Bacterial Endotoxins	<1.0 EU/µg rHuTNF, His	<0.5 EU/µg
<b>The product is tested according to the enterprise standard. The result is QUALIFIED.</b>		

\* Gold Biotechnology, Inc. provides this Certificate of Analysis in good faith and to the best of its knowledge. It should not be substituted for the user's own raw material quality control. This material is for laboratory use only.

**Gold Biotechnology, Inc.**

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