



CERTIFICATE OF ANALYSIS

PRODUCT: Recombinant Human Colony Stimulating Factor 2 (granulocyte macrophage) FOR RESEARCH

BATCH NO.: Lot specific

MANUFACTURING DATE: Lot specific

SIZE: All pack sizes

RETEST DATE: Lot specific

TEST BASIS: ENTERPRISE STANDARD

CATALOG #: 1120-03

Item	Standard	Result
Characteristics	White Freeze-dried Powder	Conformed
pH	7.4±0.5	7.41
SDS-PAGE Electrophoresis Purity	>96%	Conformed
HPLC Purity	>96%	96.45%
Specific Biological Activity	>1.0×10 ⁷ IU/mg ED ₅₀ (TF-1) = <0.1 ng/ml	5.12×10 ⁷ IU/mg Conformed
Molecular Weight	14.6±1.5 KDa	Conformed
Bacterial Endotoxins	<1.0EU/ug rHuGM-CSF	<0.02EU/ug
<p>The product is tested according to the enterprise standard. The result is QUALIFIED.</p>		

* 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.

1328 Ashby Rd.

St. Louis, MO 63132

P: (314)890-8778

F: (314)890-0503

E: contactgoldbio86@goldbio.com

Report date: 4/5/2013