

Version 1.1

Update: 12/27/2019

## CERTIFICATE OF ANALYSIS

### Product Information

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Product Name:	GM-CSF, Human
Cat. No.:	Z00349
Lot No.:	E2102003
Storage Condition:	Lyophilized Recombinant Human Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF), although stable at room temperature for three weeks, should be stored desiccated at -18°C or below. Upon reconstitution, Recombinant Human Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF) may be stored at 4°C for short periods (two to seven days). For long term storage, it is recommended that a carrier protein (0.1% HSA or BSA) be added. Avoid repeated freeze-thaw cycles.

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### Quality Results

Test Items	Specifications	Results
Physical Appearance	White Freeze-dried Powder	Conformed
Purity (SDS-PAGE)	> 98%	Conformed
Biological Activity(ED <sub>50</sub> )	< 0.1 ng/ml	Conformed
Molecular Weight	14 kDa	Conformed
Bacterial Endotoxin	< 0.3 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: *Dandan Yao*

Date: 03/09/2021

### Quality Department

*For laboratory research use only. Direct human use, including taking orally and injection and clinical use are forbidden.*