

## Certificate of Analysis

---

Product Name: Ramucirumab  
Cat. No.: GC19534  
Batch No.: 1  
Chemical Name:

### PHYSICAL AND CHEMICAL PROPERTIES

Cas. No.: 947687-13-0  
Molecular Formula:  $C_{6374}H_{9864}N_{1692}O_{1996}S_{46}$   
Molecular Weight: 143607.26

### ANALYTICAL DATA

Appearance: Colorless to light yellow (Solution)  
Purity(SEC-HPLC): 99.40%  
Concentration: 10 mg/mL  
pH Value: 6.3  
Endotoxin Level: <0.20 EU/mg  
Activity: 101% of Reference  
Formulation: It is formulated in a sterile solution containing L-histidine, L-histidine hydrochloridemonohydrate, sodium chloride, glycine, Polysorbate 80.  
Storage and Handling: Store at 4°C, do not freeze  
Conclusion: The product has been tested and complies with the given specifications.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: (626) 353-8530 Fax: (626) 353-8530 E-mail: tech@glpbio.com  
Address: 10292 Central Ave. #205, Montclair, CA, USA