

## Product Data Sheet

Product Name: Compstatin

Cat. No.: GC15251

### Chemical Properties

Cas. No. 206645-99-0

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 Chemical Name ((4R,5Z,7S,8Z,10S,11Z,13S,14Z,17Z,19S,20Z,22S,23Z,25S,26Z,28S,29Z,31S,32Z,34R)-10,13-bis((1H-imidazol-5-yl)methyl)-19-((1H-indol-3-yl)methyl)-34-((Z)-((2S,3S)-2-amino-1-hydroxy-3-methylpentylidene)amino)-4-((Z)-((2S,3R)-1,3-dihydroxy-1-aminobutan-2-yl)

SMILES CC[C@]([C@@](N)([H])/C(O)=N/[C@@]/C(O)=N/[C@@]/C(O)=N/[C@@]/C(O)=N/[C@@]/C(O)=N/[C@@]/C(O)=N/[C@@]/C(O)=N/C/C(O)=N/[C@@]/C(O)=N/[C@@]/C(O)=N/1([H])CCNC(N)=N([H])CC2=CN=CN2([H])CC3=CN=CN3([H])CC4=CNC5=CC=CC=C45([H])CC(O)=O([H])

Formula C<sub>66</sub>H<sub>99</sub>N<sub>23</sub>O<sub>17</sub>S<sub>2</sub>

M.Wt 1550.77

Solubility Soluble to 2 mg/ml in sterile water

Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure 

### Protocol

#### Animal experiment:

Compstatin-perfused circuit: pig xenografts are perfused with human blood containing Compstatin (final conc. 0.088 mg/mL). Control group: pig kidneys perfused with human blood and control agent. The total fluid volume, protein concentration and amount of blood are equal in both the Compstatin and control perfusion circuits, and the perfusion is performed in both circuits simultaneously with pooled blood from the same two donors.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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### References:

- [1]. Soulika AM, et al.  
Inhibition of  
heparin/protamine  
complex-induced  
complement activation by  
Compstatin in baboons.  
Clin Immunol. 2000  
Sep;96(3):212-21.
- [2]. Fiane AE, et al.  
Compstatin, a peptide  
inhibitor of C3, prolongs  
survival of ex vivo  
perfused pig xenografts.  
Xenotransplantation.  
1999 Feb;6(1):52-65.

### Background

Compstatin is a 13-residue cyclic peptide and a potent inhibitor of the complement system, and has species specificity.

Compstatin binds to baboon C3 and is resistant to proteolytic cleavage in baboon blood (similar to humans); Compstatin inhibits only the activation of primates' complement system[1].

Compstatin (21 mg/kg) produces complete inhibition when given as a combination of bolus injection and infusion. Compstatin completely inhibits in vivo heparin/protamine-induced complement activation without adverse effects on heart rate or systemic arterial, central venous, and pulmonary arterial pressures[1]. Pig xenografts survival is significantly longer in the Compstatin perfused group than in the control group. At rejection the biopsy samples obtained from kidneys perfused with Compstatin show less deposition of C3 and fibrin than do the control kidneys[2].

### References:

- [1]. Soulika AM, et al. Inhibition of heparin/protamine complex-induced complement activation by Compstatin in baboons. Clin Immunol. 2000 Sep;96(3):212-21.
- [2]. Fiane AE, et al. Compstatin, a peptide inhibitor of C3, prolongs survival of ex vivo perfused pig xenografts. Xenotransplantation. 1999 Feb;6(1):52-65.

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