# **Certificate of Analysis**

Print Date: Apr 11th 2019

#### Product Name: Surfen

CAS Number: 5424-37-3 IUPAC Name: N,N'-Bis(4-amino-2-methyl-6-quinolinyl)urea dihydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula: Batch Molecular Weight:** Physical Appearance: Solubility:

Storage: **Batch Molecular Structure:** 

C21H20N6O.2HCI.11/2H2O 472.37 Beige solid water to 20 mM DMSO to 20 mM Store at -20°C

Found

NH, ŃΗ,

2HCI

5.33

5.45

53.26

17.79

17.71

## 2. ANALYTICAL DATA

HPLC: Shows >99.7% purity <sup>1</sup>H NMR: Consistent with structure Mass Spectrum: Consistent with structure Microanalysis: Carbon Hydrogen Nitrogen Theoretical 53.4

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Catalog No.: 6634 Batch No.: 1

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## **Product Information**

## www.tocris.com

Print Date: Apr 11th 2019

## Product Name: Surfen

Catalog No.: 6634

Batch No.: 1

CAS Number:5424-37-3IUPAC Name:N,N'-Bis(4-amino-2-methyl-6-quinolinyl)urea dihydrochloride

## **Description:**

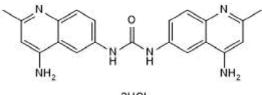
Heparin sulfate antagonist. Inhibits heparin sulfate-mediated cell attachment in vitro. Maintains hESCs in a pluripotent state by reversible inhibition of glycan-growth factor interactions.

### **Physical and Chemical Properties:**

Batch Molecular Formula:  $C_{21}H_{20}N_6O.2HCI.1\frac{1}{2}H_2O$ Batch Molecular Weight: 472.37 Physical Appearance: Beige solid

Minimum Purity: >98%

**Batch Molecular Structure:** 



2HCI

Storage: Store at -20°C

Solubility & Usage Info: water to 20 mM DMSO to 20 mM

**Stability and Solubility Advice:** 

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a  $45-60^{\circ}C$  water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

#### References:

Huang et al (2018) Small molecule antagonist of cell surface glycosaminoglycans restricts mouse embryonic stem cells in a pluripotent state. Stem Cells. 36 45. PMID: 28984039.

Schuksz et al (2008) Surfen, a small molecule antagonist of heparan sulfate. Proc.Natl.Acad.Sci.USA 105 13074. PMID: 18725627.

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