

**Product Name:** Nafamostat mesylate

**Catalog No.:** 3081

**Batch No.:** 6

CAS Number: 82956-11-4

IUPAC Name: 4-[(Aminoiminomethyl)amino]benzoic acid 6-(aminoiminomethyl)-2-naphthalenyl ester dimethanesulfonate

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>19</sub>H<sub>17</sub>N<sub>5</sub>O<sub>2</sub>·2CH<sub>4</sub>O<sub>3</sub>S

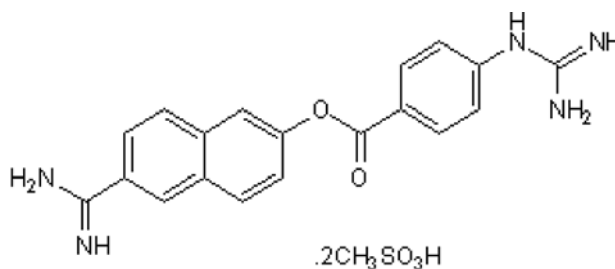
**Batch Molecular Weight:** 539.59

**Physical Appearance:** White solid

**Solubility:** water to 100 mM  
DMSO to 100 mM

**Storage:** Store at +4°C

**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.5% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	46.75	4.67	12.98
Found	46.65	4.67	13.07

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

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**Description:**

Nafamostat mesylate is a broad spectrum serine protease inhibitor. Displays selectivity for human trypsin when used at relatively low concentrations. Reduces eosinophil infiltration, mast cell activation and airway responsiveness in a murine model of asthma. Inhibits SARS-CoV-2 infection in vitro ( $EC_{50}$  = 22.50  $\mu$ M). Tocris products are for biomedical research use only. They are not intended for human or veterinary use.

**Physical and Chemical Properties:**

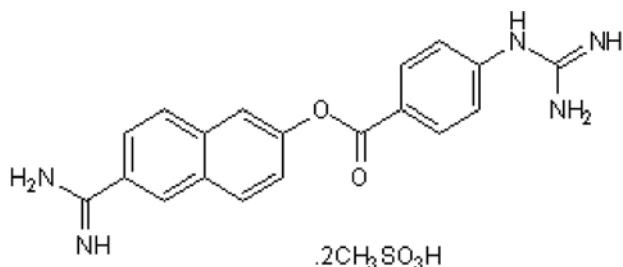
Batch Molecular Formula:  $C_{19}H_{17}N_5O_2 \cdot 2CH_4O_3S$

Batch Molecular Weight: 539.59

Physical Appearance: White solid

**Minimum Purity:**  $\geq 99\%$

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

water to 100 mM

DMSO to 100 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°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:**

**Wang et al** (2020) Remdesivir and chloroquine effectively inhibit the recently emerged novel coronavirus (2019-nCoV) *in vitro*. *Cell Research* **30** 269. PMID: 32020029.

**Chen et al** (2006) Serine protease inhibitors nafamostat mesilate and gabexate mesilate attenuate allergen-induced airway inflammation and eosinophilia in a murine model of asthma. *J.Allergy Clin.Immunol.* **118** 105. PMID: 16815145.

**Mori et al** (2003) Nafamostat mesilate is an extremely potent inhibitor of human trypsin. *J.Pharmacol.Sci.* **92** 420. PMID: 12939527.

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