Certificate of Analysis

Product Name: **RHPS 4 methosulfate** **Catalog No.: 5311** **Batch No.: 1**

CAS Number: 390362-78-4

IUPAC Name: 3,11-Difluoro-6,8,13-trimethylquino[4,3,2-*kl*]acridinium methylsulfate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{22}H_{17}F_2N_2.CH_3O_4S.¼H_2O$

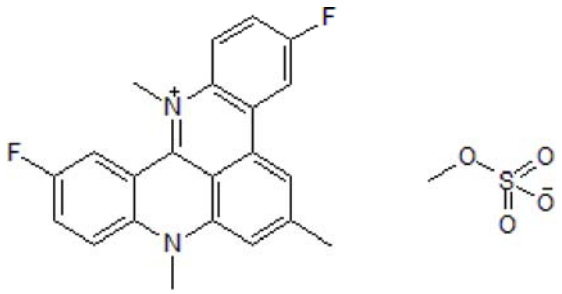
Batch Molecular Weight: 462.98

Physical Appearance: Red solid

Solubility: water to 10 mM with gentle warming
DMSO to 20 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.1% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	59.67	4.46	6.05
Found	59.39	4.3	5.88

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Product Information

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IUPAC Name: 3,11-Difluoro-6,8,13-trimethylquino[4,3,2-*kl*]acridinium methylsulfate

Description:

Telomerase inhibitor. Inhibits growth of medulloblastoma and glioblastoma cells in vitro. Induces telomere injury and apoptosis, and reduces growth in CG5 breast cancer cell xenografts in mice. Sensitizes radiation resistant glioblastoma cell lines to radiation.

Physical and Chemical Properties:

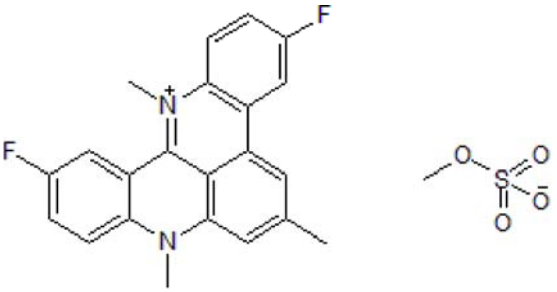
Batch Molecular Formula: $C_{22}H_{17}F_2N_2.CH_3O_4S.¼H_2O$

Batch Molecular Weight: 462.98

Physical Appearance: Red solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

water to 10 mM with gentle warming
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°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:

Berardinelli *et al* (2015) The G-quadruplex-stabilising agent RHPS4 induces telomeric dysfunction and enhances radiosensitivity in glioblastoma cells. DNA Repair (Amst.) ***25*** 104. PMID: 25467559 .

Lagah *et al* (2014) RHPS4 G-quadruplex ligand induces anti-proliferative effects in brain tumor cells. PLoS One ***9*** e86187. PMID: 24454961.

Phatak *et al* (2007) Telomere uncapping by the G-quadruplex ligand RHPS4 inhibits clonogenic tumour cell growth *in vitro* and *in vivo* consistent with a cancer stem cell targeting mechanism. Br.J.Cancer ***96*** 1223. PMID: 17406367.

Salvati *et al* (2007) Telomere damage induced by the G-quadruplex ligand RHPS4 has an antitumor effect. J.Clin.Invest. ***117*** 3236. PMID: 17932567.

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