

**Product Name:** Janelia Fluor® 549, Maleimide

**Catalog No.:** 6500

**Batch No.:** 4

**IUPAC Name:** 2-(3-(Azetidin-1-ium-1-ylidene)-6-(azetidin-1-yl)-3*H*-xanthen-9-yl)-4-((2-(2,5-dioxo-2,5-dihydro-1*H*-pyrrol-1-yl)ethyl)carbamoyl)benzoate trifluoroacetate

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>33</sub>H<sub>28</sub>N<sub>4</sub>O<sub>6</sub>·C<sub>2</sub>HF<sub>3</sub>O<sub>2</sub>

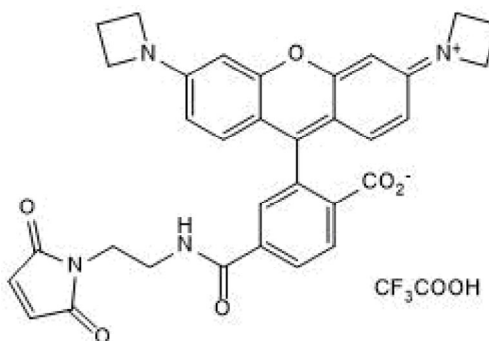
**Batch Molecular Weight:** 690.63

**Physical Appearance:** Purple solid

**Solubility:** DMSO to 100 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 94.6% purity at 550 nm

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

**Mass Spectrum:** Consistent with structure

**UV Spectrum:** Consistent with structure

**λ<sub>max</sub>:** 555 nm (0.01M Phosphate buffer)

**λ<sub>ex</sub>:** 555 nm (0.01M Phosphate buffer)

**λ<sub>em</sub>:** 576 nm (0.01M Phosphate buffer)

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

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**Description:**

Key information: Janelia Fluor<sup>®</sup> 549, Maleimide is a yellow fluorescent dye, supplied with a maleimide reactive group for conjugation (thiol reactivity). Suitable for live cell imaging. Application: Suitable for flow cytometry, confocal microscopy, super resolution microscopy (SRM) including dSTORM (in both live and fixed cells) and STED. Cell permeable. Properties and Photophysical Data: Excitation and emission maxima ( $\lambda$ ) are 549 nm and 571 nm, respectively; quantum yield = 0.88; extinction coefficient = 101,000 M<sup>-1</sup>cm<sup>-1</sup>; A280 correction factor = 0.169; lactone-zwitterion equilibrium constant ( $K_{L-Z}$ ) = 3.5. Please see the product... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

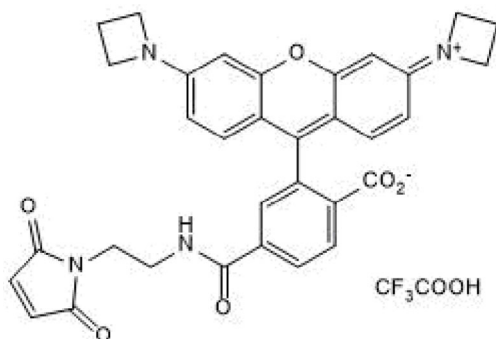
Batch Molecular Formula: C<sub>33</sub>H<sub>28</sub>N<sub>4</sub>O<sub>6</sub>.C<sub>2</sub>HF<sub>3</sub>O<sub>2</sub>

Batch Molecular Weight: 690.63

Physical Appearance: Purple solid

**Minimum Purity:** ≥90%

**Batch Molecular Structure:**



**Storage:** Store at -20°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:**

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. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**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.

**Licensing Information:**

Sold under license from the Howard Hughes Medical Institute, Janelia Research Campus

**References:**

**Zheng et al** (2019) Rational design of fluorogenic and spontaneously blinking labels for super-resolution imaging. *ACS Cent.Sci.* **5** 1602. PMID: 31572787.

**Grimm et al** (2015) A general method to improve fluorophores for live-cell and single-molecule microscopy. *Nat.Methods.* **12** 244. PMID: 25599551.

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