

Certificate of Analysis

www.tocris.com

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: C₃₃H₂₈N₄O₆·C₂HF₃O₂

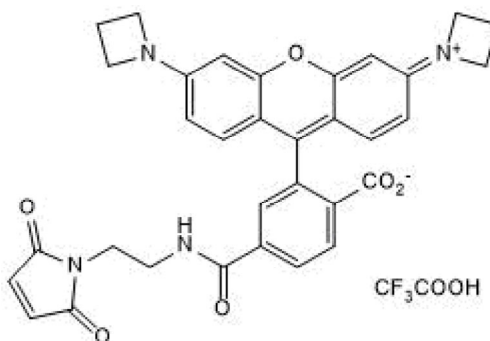
Batch Molecular Weight: 690.63

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

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

UV Spectrum: Consistent with structure

λ_{max}: 555 nm (0.01M Phosphate buffer)

λ_{ex}: 555 nm (0.01M Phosphate buffer)

λ_{em}: 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® 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 (λ) are 549 nm and 571 nm, respectively; quantum yield = 0.88; extinction coefficient = 101,000 M⁻¹cm⁻¹; 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:

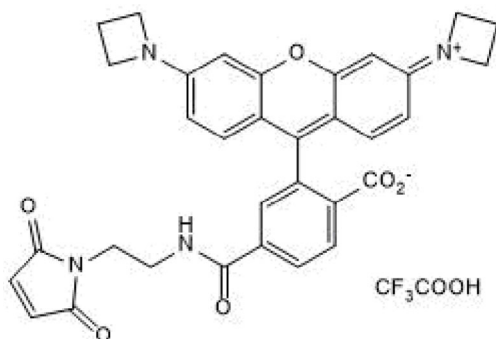
Batch Molecular Formula: C₃₃H₂₈N₄O₆·C₂HF₃O₂

Batch Molecular Weight: 690.63

Physical Appearance: Purple solid

Minimum Purity: ≥90%

Batch Molecular Structure:



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.

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

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