

# Certificate of Analysis

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**Product Name:** Janelia Fluor® 549, NHS ester

**Catalog No.:** 6147

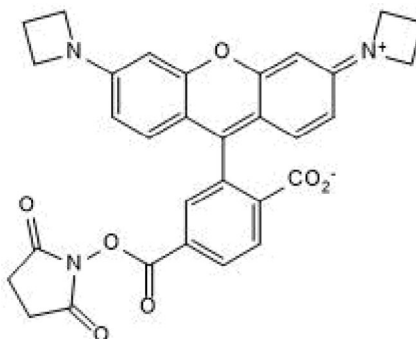
**Batch No.:** 9

**CAS Number:** 1811539-32-8

**IUPAC Name:** 3,6-Di-1-azetidiny-9-[2-carboxy-5-[[[2,5-dioxo-1-pyrrolidinyl]oxy]carbonyl]phenyl]xanthylium, inner salt

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>31</sub>H<sub>25</sub>N<sub>3</sub>O<sub>7</sub>  
**Batch Molecular Weight:** 551.56  
**Physical Appearance:** Purple solid  
**Solubility:** DMSO to 100 mM  
 DMF to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**UV Spectrum:** Consistent with structure  
**λ<sub>max</sub>:** 555 nm (PBS)  
**λ<sub>ex</sub>:** 556 nm (PBS)  
**λ<sub>em</sub>:** 576 nm (PBS)

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

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**Description:**

**Key Information:** Janelia Fluor® 549, NHS ester is a yellow fluorescent dye; supplied with an NHS ester reactive group for the labeling of primary amines. Suitable for live cell imaging. **Application:** Suitable for flow cytometry, confocal microscopy, super resolution microscopy (SRM) including dSTORM and STED. Janelia Fluor® 549, NHS ester is cell permeable. **Properties and Photophysical Data:** NHS ester can be converted to relevant substrate for use in self-labeling tag systems, e.g. HaloTag® and SNAP-tag®. Excitation and emission maxima (λ) are 549 nm and 571 nm, respectively; quantum yield = 0.88; extinction coefficient ... Please see product specific page on www.tocris.com for full description.

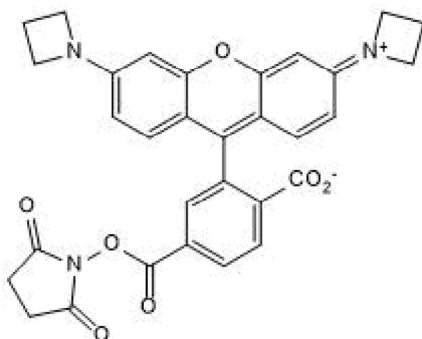
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**Batch Molecular Weight:** 551.56

**Physical Appearance:** Purple solid

**Batch Molecular Structure:**



**Storage:** Store at -20°C. This product is packaged under an inert atmosphere.

**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

DMF 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.

**Legant et al** (2016) High-density three-dimensional localization microscopy across large volumes. *Nat.Methods* **13** 359. PMID: 26950745.

**Deng et al** (2015) CASFISH: CRISPR/Cas9-mediated in situ labeling of genomic loci in fixed cells. *Proc.Natl.Acad.Sci.USA.* **112** 11870. PMID: 26324940.

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