

**Product Name:** Janelia Fluor<sup>®</sup> 646, NHS ester

**Catalog No.:** 6148

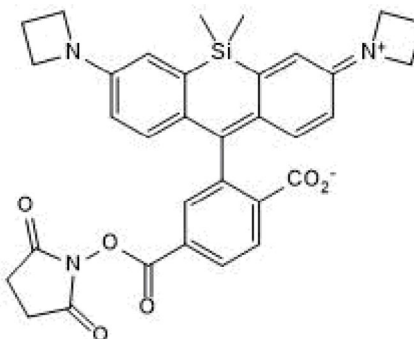
**Batch No.:** 7

**CAS Number:** 1811539-59-9

**IUPAC Name:** 1-[7-(1-Azetidinyl)-10-[2-carboxy-5-[[2,5-dioxo-1-pyrrolidinyl]oxy]carbonyl]phenyl]-9,9-dimethyl-9-silaanthracen-2-(9H)-ylidene]azetidinium, inner salt

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>33</sub>H<sub>31</sub>N<sub>3</sub>O<sub>6</sub>Si  
**Batch Molecular Weight:** 593.71  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 5 mM  
 DMF to 50 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 97.8% purity at 658 nm  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

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

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**Description:**

Key Information: Janelia Fluor® 646, NHS ester is a red fluorogenic 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) techniques including dSTORM (in both live and fixed cells) and STED. 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®. Can be multiplexed for two color imaging with Janelia Fluor® 549 NHS ester (Cat. No. 6147). Excitatio... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

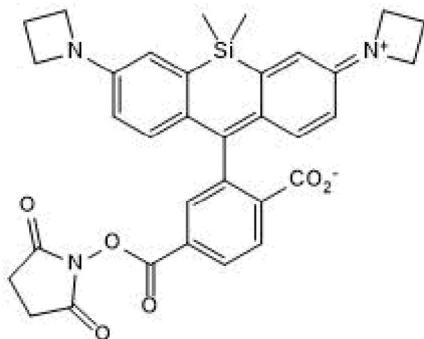
Batch Molecular Formula: C<sub>33</sub>H<sub>31</sub>N<sub>3</sub>O<sub>6</sub>Si

Batch Molecular Weight: 593.71

Physical Appearance: Yellow solid

**Minimum Purity:** ≥95%

**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 5 mM

DMF to 50 mM

We recommend that stock solutions of this dye are prepared in anhydrous DMF. To measure the absorbance spectrum of this dye we recommend the following solvent: ethanol or trifluoroethanol plus 0.1% TFA. **CAUTION** - This product is chemically unstable in the presence of Trifluoroacetic acid (TFA).

**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.

**Li et al** (2016) Real-time imaging of Huntingtin aggregates diverting target search and gene transcription. *Elife* **5** e17056. PMID: 27484239.

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