

# Certificate of Analysis

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**Product Name:** Janelia Fluor® 646b, NHS ester

**Catalog No.:** 8159

**Batch No.:** 1

**IUPAC Name:** 2,5-Dioxopyrrolidin-1-yl 3,7-di(azetidin-1-yl)-5,5-dimethyl-3'*H*,5*H*-spiro[dibenzo[*b,e*]siline-10,1'-isobenzofuran]-6'-carboxylate

## 1. PHYSICAL AND CHEMICAL PROPERTIES

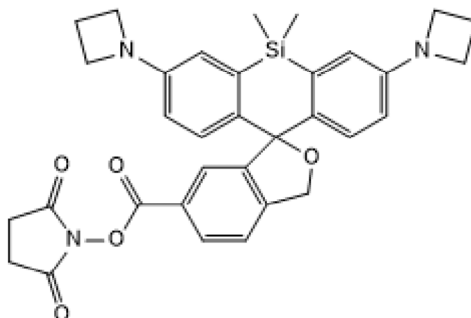
**Batch Molecular Formula:** C<sub>33</sub>H<sub>33</sub>N<sub>3</sub>O<sub>5</sub>Si

**Batch Molecular Weight:** 579.73

**Physical Appearance:** Blue film

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 94.4% purity at 656 nm

**Mass Spectrum:** Consistent with structure

**UV Spectrum:** Consistent with structure

**λ<sub>max</sub>:** 661 nm (EtOH + 0.1% TFA)

**λ<sub>ex</sub>:** 662 nm (EtOH + 0.1% TFA)

**λ<sub>em</sub>:** 678 nm (EtOH + 0.1% TFA)

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

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**Description:**

Spontaneously Blinking Janelia Fluor® Dyes allow facile single-molecule localization microscopy (SMLM) in cells and dense biomolecular structures, without the need for photoactivation or redox buffers. These spontaneously blinking dyes harness Janelia Fluor® technology to deliver dyes that automatically cycle between 'off' and 'on' states with an ideal duty cycle for super resolution microscopy experiments. Key Information: Janelia Fluor® 646b, NHS ester is a spontaneously blinking fluorescent dye, supplied with an NHS ester reactive group for the labeling of primary amines. Suitable for DNA labeling using amine-terminated oligo... Please see product specific page on [www.tocris.com](http://www.tocris.com) for full description.

**Physical and Chemical Properties:**

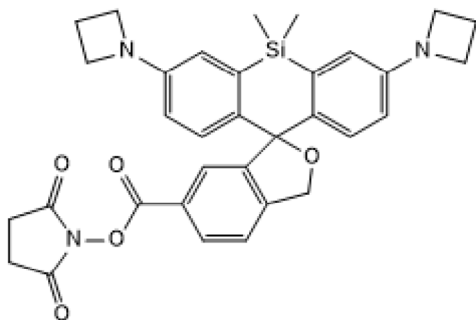
Batch Molecular Formula: C<sub>33</sub>H<sub>33</sub>N<sub>3</sub>O<sub>5</sub>Si

Batch Molecular Weight: 579.73

Physical Appearance: Blue film

**Minimum Purity:** ≥90%

**Batch Molecular Structure:**



**References:**

**Holland et al** (2024) A series of spontaneously blinking dyes for super-resolution microscopy. *bioRxiv*. PMID: 38766149.

**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.

**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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