

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

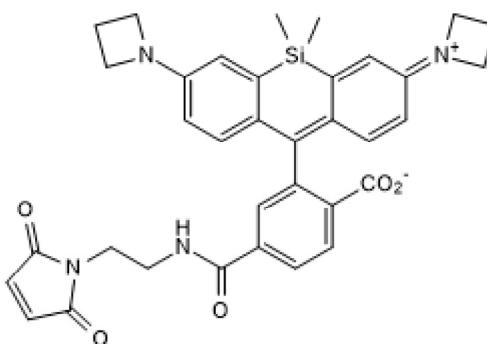
**Catalog No.:** 6590

**Batch No.:** 3

**IUPAC Name:** 2-(3-(Azetidin-1-ium-1-ylidene)-7-(azetidin-1-yl)-5,5-dimethyl-3,5-dihydrodibenzo[*b,e*]silin-10-yl)-4-((2-(2,5-dioxo-2,5-dihydro-1*H*-pyrrol-1-yl)ethyl)carbamoyl)benzoate

## 1. PHYSICAL AND CHEMICAL PROPERTIES

|                                   |  |
|-----------------------------------|--|
| <b>Batch Molecular Formula:</b>   | C <sub>35</sub> H <sub>34</sub> N <sub>4</sub> O <sub>5</sub> Si |
| <b>Batch Molecular Weight:</b>    | 618.75   |
| <b>Physical Appearance:</b>       | Yellow solid   |
| <b>Solubility:</b>                | DMSO to 100 mM   |
| <b>Storage:</b>                   | Store at -20°C   |
| <b>Batch Molecular Structure:</b> |  |



## 2. ANALYTICAL DATA

|                           |                              |
|---------------------------|------------------------------|
| <b>HPLC:</b>              | Shows 97.7% purity at 648 nm |
| <b><sup>1</sup>H NMR:</b> | Consistent with structure    |
| <b>Mass Spectrum:</b>     | Consistent with structure    |
| <b>UV Spectrum:</b>       | Consistent with structure    |
| <b>λ<sub>max</sub>:</b>   | 655 nm (EtOH + 0.1% TFA)     |
| <b>λ<sub>ex</sub>:</b>    | 655 nm (EtOH + 0.1% TFA)     |
| <b>λ<sub>em</sub>:</b>    | 669 nm (EtOH + 0.1% TFA)     |

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

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**Description:**

Key information: Janelia Fluor® 646, Maleimide is a red fluorogenic 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. Can be multiplexed for two color imaging with Janelia Fluor® 549 SE (Cat. No. 6147). Cell permeable. Properties and Photophysical Data: Excitation and emission maxima (λ) are 646 nm and 664 nm, respectively; quantum yield = 0.54; extinction coefficient = 152,000 M<sup>-1</sup>cm<sup>-1</sup> (measured in e... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

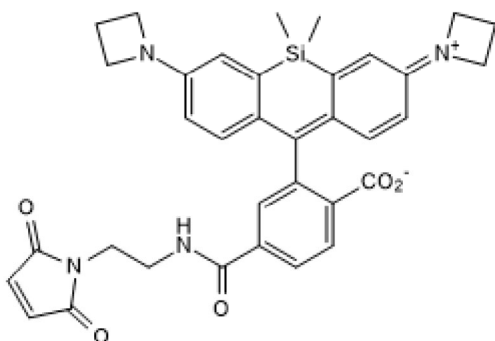
Batch Molecular Formula: C<sub>35</sub>H<sub>34</sub>N<sub>4</sub>O<sub>5</sub>Si

Batch Molecular Weight: 618.75

Physical Appearance: Yellow solid

**Minimum Purity:** ≥95%

**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

**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

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