

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

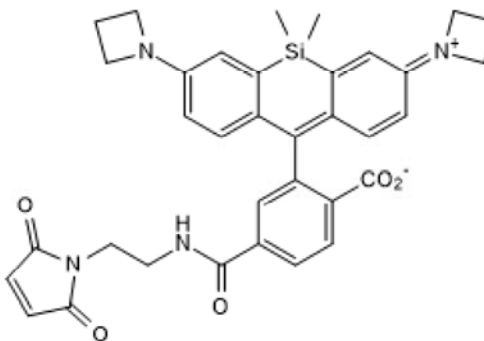
**Catalog No.:** 6590

**Batch No.:** 1

**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

**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  
**Solubility:** DMSO to 100 mM  
 DMF to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows >98.4% purity  
**<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:**

Red fluorescent dye, supplied with a maleimide reactive group for conjugation (thiol reactivity). Suitable for confocal fluorescent imaging, super resolution microscopy (SRM) techniques such as dSTORM (live and fixed cells), STED and PAINT imaging. Can be multiplexed for two color imaging with Janelia Fluor<sup>®</sup> 549 SE (Cat. No. 6147). Cell permeable. Excitation maximum = 646 nm; emission maximum = 664 nm. Quantum yield = 0.54; Max. extinction coefficient = 152,000 M<sup>-1</sup>cm<sup>-1</sup> (measured in ethanol plus 0.1% TFA); A280 correction factor is 0.19. To measure the absorbance spectrum of this dye we recommend the following solvent: ethanol or triflu... Please see product datasheet on www.tocris.com for full description.

**Physical and Chemical Properties:**

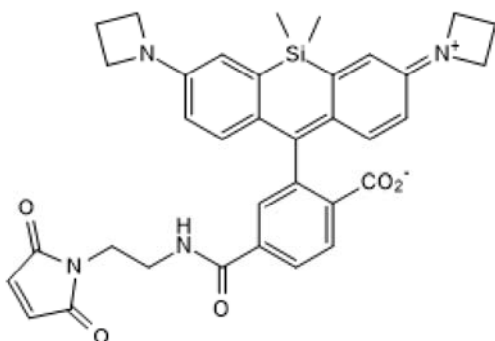
Batch Molecular Formula: C<sub>35</sub>H<sub>34</sub>N<sub>4</sub>O<sub>5</sub>Si

Batch Molecular Weight: 618.75

Physical Appearance: Yellow solid

**Minimum Purity:** >95%

**Batch Molecular Structure:**



**References:**

**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. 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

**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. Our standard recommendations are:

**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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**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel:+1 612 379 2956