

**Product Name:** Hoechst Janelia Fluor® 646

**Catalog No.:** 6804

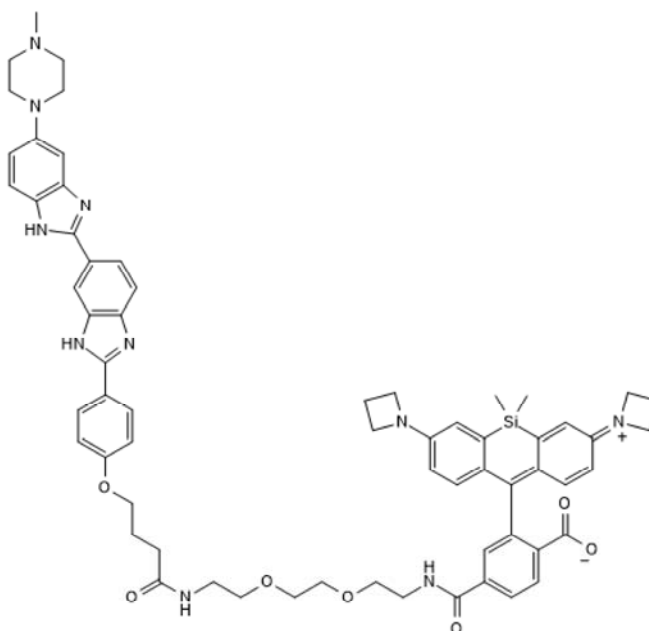
**Batch No.:** 1

**CAS Number:** 2462011-60-3

**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-(2-(4-(4-(5-(4-methylpiperazin-1-yl)-1*H*,3'*H*-[2,5'-bibenzo[d]imidazol]-2'-yl)phenoxy)butanamido)ethoxy)ethoxy)ethyl)carbamoyl)benzoate

## 1. PHYSICAL AND CHEMICAL PROPERTIES

<b>Batch Molecular Formula:</b>	C <sub>64</sub> H <sub>70</sub> N <sub>10</sub> O <sub>7</sub> Si
<b>Batch Molecular Weight:</b>	1119.39
<b>Physical Appearance:</b>	Blue solid
<b>Solubility:</b>	DMSO to 10 mM
<b>Storage:</b>	Store at -20°C
<b>Batch Molecular Structure:</b>	



## 2. ANALYTICAL DATA

<b>HPLC:</b>	Shows 90.4% purity at 664 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>	665 nm (Ethanol + 0.1% TFA)
<b>λ<sub>ex</sub>:</b>	665 nm (Ethanol + 0.1% TFA)
<b>λ<sub>em</sub>:</b>	670 nm (Ethanol + 0.1% TFA)

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

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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-(2-(4-(5-(4-methylpiperazin-1-yl)-1*H*,3'*H*-[2,5'-bibenzo[*d*]imidazol]-2'-yl)phenoxy)butanamido)ethoxy)ethoxy)ethyl)carbamoyl)benzoate

**Description:**

Hoechst Janelia Fluor® 646 is a fluorogenic red-emitting DNA probe. Preferentially stains and binds minor groove of AT-rich regions. Can be combined with fluorogenic green-emitting DNA probe Hoechst Janelia Fluor® 526 for multiplexing experiments. Hoechst Janelia Fluor® 646 can also be combined with Hoechst Janelia Fluor® 526 to perform dual-color STED using the same depletion laser ( $\lambda_{dep} = 775 \text{ nm}$ ). Sub-diffraction spatial resolution STED imaging can be achieved using Hoechst Janelia Fluor® 646 in *E. coli* cells (~100 nM - 1  $\mu\text{M}$ ). Hoechst Janelia Fluor® 646 is a desirable alternative to large oligonucleotide... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

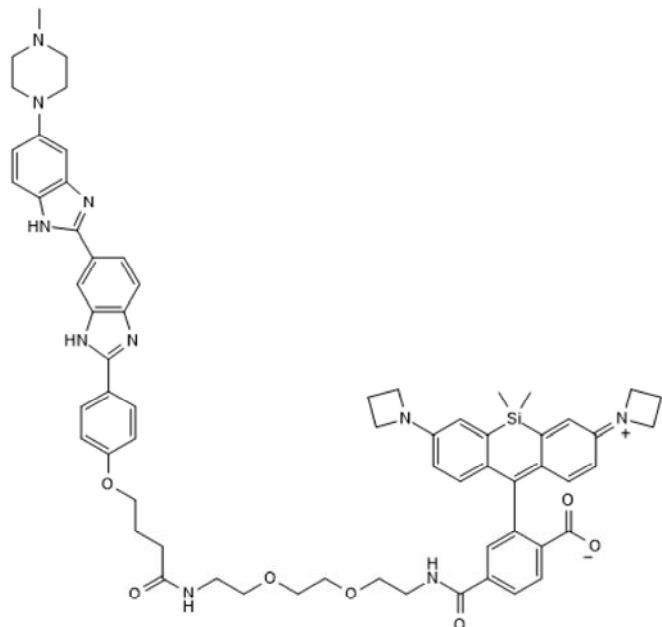
Batch Molecular Formula: C<sub>64</sub>H<sub>70</sub>N<sub>10</sub>O<sub>7</sub>Si

Batch Molecular Weight: 1119.39

Physical Appearance: Blue solid

**Minimum Purity:** ≥90%

**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 10 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. 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

**References:**

Spahn *et al* (2019) Whole-Cell, 3D, and multicolor STED imaging with exchangeable fluorophores. *Nano Lett.* **19** 500. PMID: 30525682.

Spahn *et al* (2018) A toolkit for multiplexed super-resolution imaging of the *E. coli* nucleoid and elementary processes. *Sci. Rep.* **8** 14768. PMID: 30282984.

bio-techne.com (2017) A general method to synthesize fluorophores for live-cell and in vitro imaging. *Methods* **146** 107-118. PMID: 28869757.

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