Certificate of Analysis

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

Batch Molecular Formula: $C_{64}H_{70}N_{10}O_7Si$

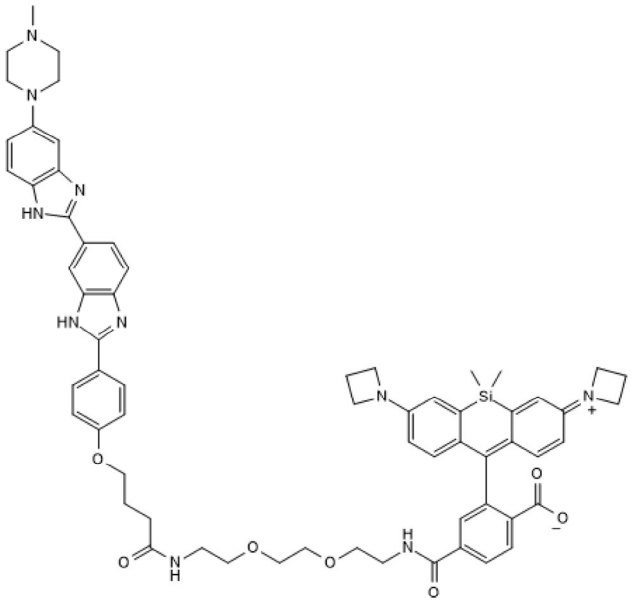
Batch Molecular Weight: 1119.39

Physical Appearance: Blue solid

Solubility: DMSO to 10 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 89.8% purity at 664 nm

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

UV Spectrum: Consistent with structure

λ_{max}: 665 nm (Ethanol + 0.1% TFA)

λ_{ex}: 665 nm (Ethanol + 0.1% TFA)

λ_{em}: 670 nm (Ethanol + 0.1% TFA)

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

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Description:

Key information: Hoechst Janelia Fluor® 646 is a fluorogenic red-emitting DNA probe. Suitable for fixed and live-cell imaging. Application:confocal microscopy, super resolution microscopy (SRM) (including PALM and PAINT), lattice light sheet microscopy. Properties and Photophysical Data: Hoechst Janelia Fluor® 646 preferentially stains and binds minor groove of AT-rich regions. The compound can be combined with fluorogenic green-emitting DNA probe Hoechst Janelia Fluor® 526 (Cat. No. 7313) for multiplexing experiments. Hoechst Janelia Fluor® 646 can also be combined with Hoechst Janelia Fluor® 526 to perform dual-color ... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

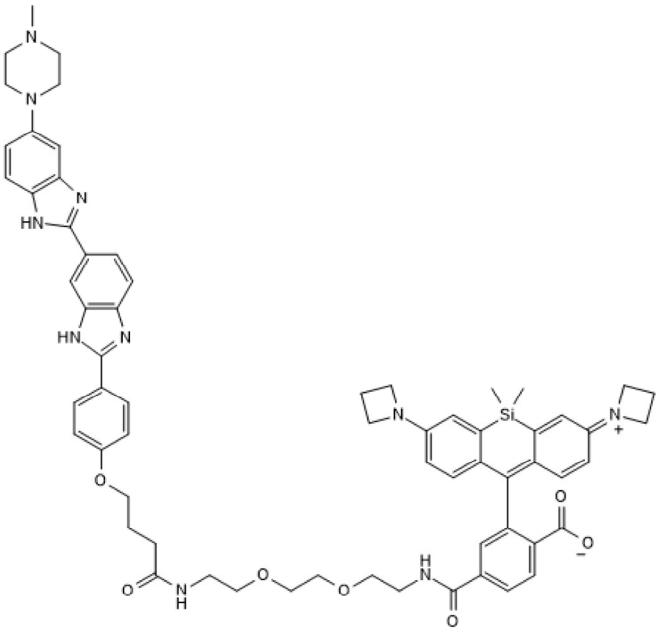
Batch Molecular Formula: $C_{64}H_{70}N_{10}O_7Si$

Batch Molecular Weight: 1119.39

Physical Appearance: Blue solid

Minimum Purity: ≥85%

Batch Molecular Structure:



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 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. *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:

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 toolbox for multiplexed super-resolution imaging of the E. coli nucleoid and membrane using novel PAINT labels. Sci. Rep. ***8*** 14768. PMID: 30282984.

Grimm *et al* (2017) A general method to fine-tune fluorophores for live-cell and *in vivo* imaging. Nat. Methods ***14*** 987. PMID: 28869757.

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
info.emea@bio-techne.com
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956