

Certificate of Analysis

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Product Name: Janelia Fluor® 646, Haloalkane

Catalog No.: 8809

Batch No.: 1

CAS Number: 1811539-60-2

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-(6-chlorohexyloxy)ethoxy)ethyl)carbamoyl)benzoate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₉H₄₈ClN₃O₅Si

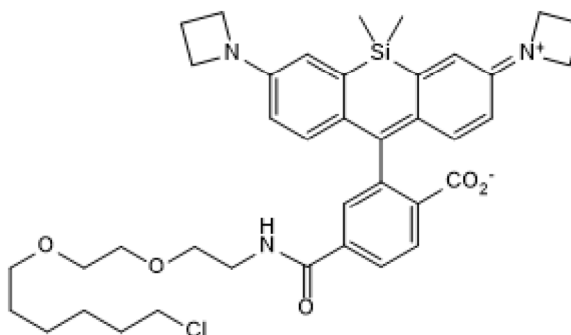
Batch Molecular Weight: 702.36

Physical Appearance: Off White solid

Solubility: DMSO to 10 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97.8% purity at 655 nm

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

UV Spectrum: Consistent with structure

λ_{max}: 655 nm (Ethanol + 0.1% TFA)

λ_{ex}: 653 nm (Ethanol + 0.1% TFA)

λ_{em}: 669 nm (Ethanol + 0.1% TFA)

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

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: Janelia Fluor® 646, Haloalkane is a red cell-permeable fluorogenic fluorescent dye with a chloroalkane handle. **Application:** Live-cell imaging as a self-labeling tag substrate. Suitable for confocal microscopy, light sheet microscopy, super resolution microscopy (SRM) techniques including dSTORM (in both live and fixed cells). Stable to fixation. Cell permeable. **Properties and Photophysical Data:** Janelia Fluor® 646, Haloalkane shows a high degree of fluorogenicity. Excitation and emission maxima (λ) are 646 nm and 664 nm, respectively; quantum yield = 0.54; extinction coefficient = 152,000 M⁻¹cm⁻¹ (measured in ... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

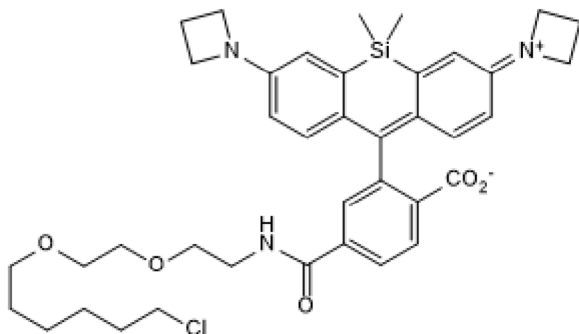
Batch Molecular Formula: C₃₉H₄₈ClN₃O₅Si

Batch Molecular Weight: 702.36

Physical Appearance: Off White solid

Minimum Purity: ≥95%

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

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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:

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

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