bio-techne
TOCRIS

Print Date: Nov 14th 2025

Certificate of Analysis

www.tocris.com

Product Name: **Janelia Fluor® 646, Azide** **Catalog No.: 7088** **Batch No.: 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-(2-(2-(2-azidoethoxy)ethoxy)ethoxy)ethyl)carbamoyl)benzoate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{37}H_{44}N_6O_6Si$

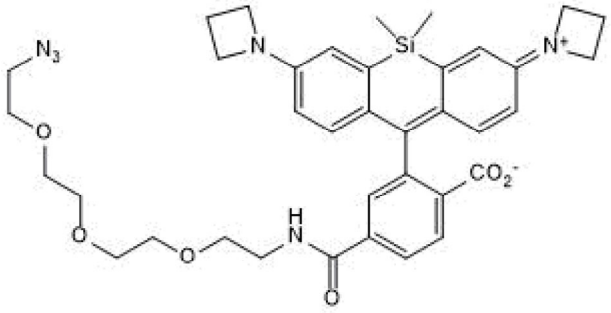
Batch Molecular Weight: 696.88

Physical Appearance: Pale green solid

Solubility: DMF to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity at 655 nm

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

UV Spectrum: Consistent with structure

λ_{max}: 656 nm (EtOH + 0.1% TFA)

λ_{ex}: 656 nm (EtOH + 0.1% TFA)

λ_{em}: 669 nm (EtOH + 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

Product Name: **Janelia Fluor® 646, Azide** **Catalog No.: 7088** **Batch No.: 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-(2-(2-(2-azidoethoxy)ethoxy)ethoxy)ethyl)carbamoyl)benzoate

Description:

Key Information: Janelia Fluor® 646, Azide is a red fluorogenic fluorescent dye, supplied with an azide reactive handle for copper-free click chemistry. Suitable for live cell imaging. Application: Suitable for confocal microscopy and super resolution microscopy (SRM) techniques 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 $M^{-1}cm^{-1}$ (measured in ethanol plus... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

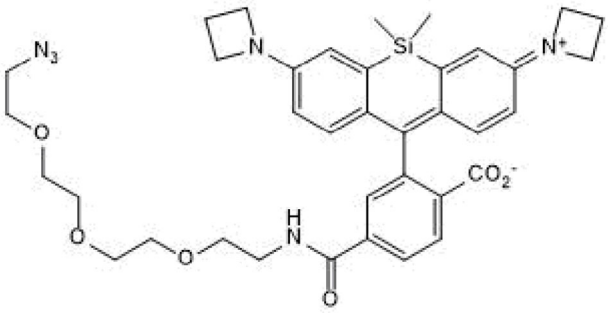
Batch Molecular Formula: $C_{37}H_{44}N_6O_6Si$

Batch Molecular Weight: 696.88

Physical Appearance: Pale green 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:

DMF to 50 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:

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.

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