

Certificate of Analysis

www.tocris.com

Product Name: Janelia Fluor® 646, Maleimide

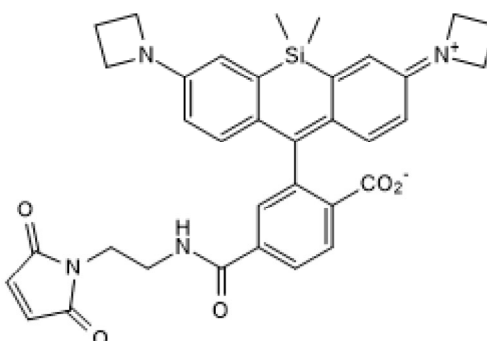
Catalog No.: 6590

Batch No.: 4

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-1H-pyrrol-1-yl)ethyl)carbamoyl)benzoate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₅H₃₄N₄O₅Si
Batch Molecular Weight: 618.75
Physical Appearance: Yellow solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97.3% purity at 648 nm
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
UV Spectrum: Consistent with structure
λ_{max}: 655 nm (EtOH + 0.1% TFA)
λ_{ex}: 654 nm (EtOH + 0.1% TFA)
λ_{em}: 671 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, Maleimide

Catalog No.: 6590

Batch No.: 4

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-1H-pyrrol-1-yl)ethyl)carbamoyl)benzoate

Description:

Key information: Janelia Fluor® 646, Maleimide is a red fluorogenic fluorescent dye, supplied with a maleimide reactive group for conjugation (thiol reactivity). Suitable for live cell imaging. Application: Suitable for flow cytometry, confocal microscopy, super resolution microscopy (SRM) 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⁻¹cm⁻¹ (measured in e... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

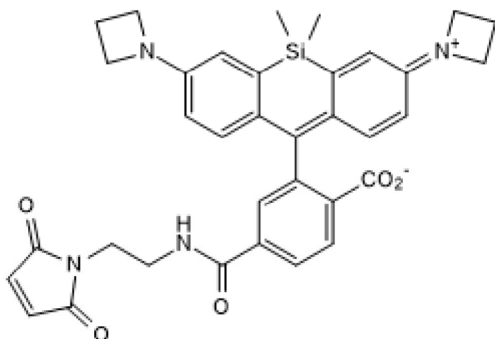
Batch Molecular Formula: C₃₅H₃₄N₄O₅Si

Batch Molecular Weight: 618.75

Physical Appearance: Yellow solid

Minimum Purity: ≥95%

Batch Molecular Structure:



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.

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 100 mM

CAUTION - This product is chemically unstable in the presence of Trifluoroacetic acid (TFA). It 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

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