

Product Name: Janelia Fluor[®] 646, free acid

Catalog No.: 6993

Batch No.: 3

IUPAC Name: 1-[7-(1-Azetidinyl)-10-(2,5-dicarboxyphenyl)-9,9-dimethyl-9-silaanthracen-2(9*H*)-ylidene]azetidinium inner salt trifluoroacetate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₉H₂₈N₂O₄Si.CF₃CO₂H

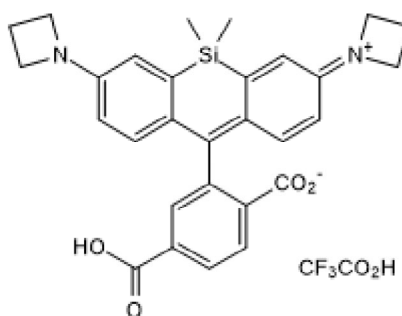
Batch Molecular Weight: 610.65

Physical Appearance: Dark blue solid

Solubility: DMF to 20 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 95.4% purity at 655 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}: 655 nm (EtOH + 0.1% TFA)

λ_{em}: 674 nm (EtOH + 0.1% TFA)

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

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Description:

Key Information: Janelia Fluor® 646, free acid is a red fluorogenic fluorescent dye; supplied with a free acid reactive group. 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. Used in protocol (2017 Grimm et al - see references below) for the synthesis of Janelia Fluor® HaloTag® and SNAP-Tag® ligands, for use in live cell imaging experiments. Cell permeable. **Properties and Photophysical Data:** Excitation and emission maxima (λ) are 646 nm and 664 nm, respectively; quantum yield = 0.54; ex... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

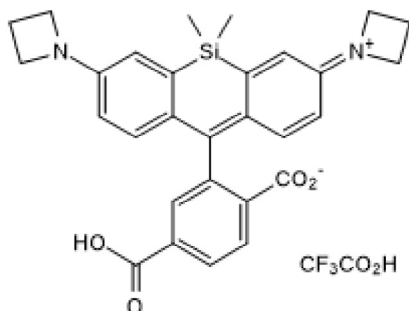
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Batch Molecular Weight: 610.65

Physical Appearance: Dark blue 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 (2017) Synthesis of Janelia Fluor HaloTag and SNAP-Tag ligands and their use in cellular imaging experiments. *Methods Mol.Biol.* **1663** 179. PMID: 28924668.

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. 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:

DMF to 20 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

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