

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

Catalog No.: 6993

Batch No.: 2

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

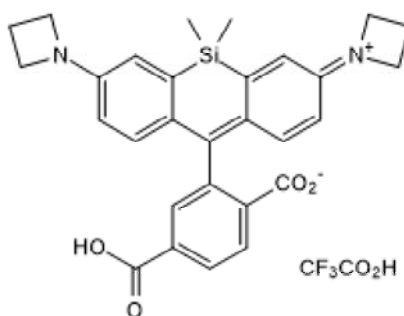
Batch Molecular Weight: 610.65

Physical Appearance: Dark blue solid

Solubility: DMF to 20 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.6% 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}: 672 nm (EtOH + 0.1% TFA)

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

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Description:

Janelia Fluor[®] 646, free acid is a red fluorogenic fluorescent dye; supplied as a free acid. 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. Suitable for confocal fluorescent imaging, super resolution microscopy (SRM) techniques such as dSTORM (live and fixed cells) and STED imaging. Also suitable for flow cytometry. Cell permeable. Excitation maximum = 646 nm; emission maximum = 664 nm; Quantum yield = 0.54; Extinction coefficient = 152,000 M⁻¹cm⁻¹. To measure the absorbance spectrum of this dye we reco... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

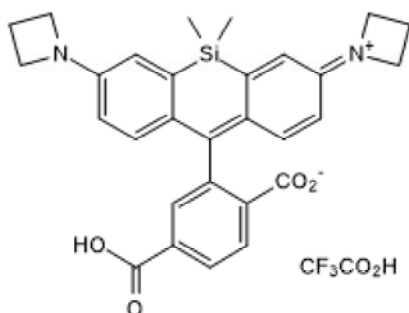
Batch Molecular Formula: C₂₉H₂₈N₂O₄Si.CF₃CO₂H

Batch Molecular Weight: 610.65

Physical Appearance: Dark blue solid

Minimum Purity: ≥95%

Batch Molecular Structure:



References:

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. Our standard recommendations are:

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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