Certificate of Analysis

Product Name: **Janelia Fluor® 635, NHS ester** **Catalog No.: 6419** **Batch No.: 3**

IUPAC Name: 1-[10-[2-Carboxy-5-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]phenyl]-9,9-dimethyl-7-[1-(3-fluoroazetidinyl)]-9-silaanthracen-2(9*H*)-ylidene]-3-fluoroazetidinium, inner salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{33}H_{29}F_2N_3O_6Si$

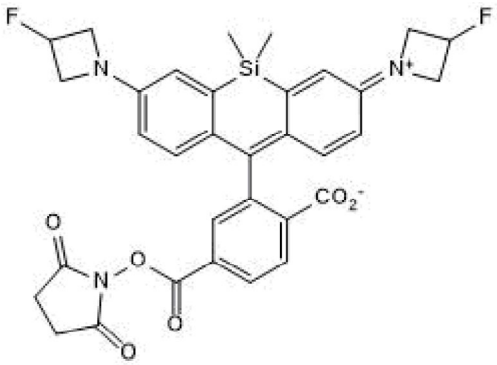
Batch Molecular Weight: 629.69

Physical Appearance: Yellow solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97.9% purity at 647 nm

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

UV Spectrum: Consistent with structure

λ_{max}: 648 nm (EtOH + 0.1% TFA)

λ_{ex}: 649 nm (EtOH + 0.1% TFA)

λ_{em}: 668 nm (EtOH + 0.1% TFA)

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Product Name: **Janelia Fluor® 635, NHS ester** **Catalog No.: 6419** **Batch No.: 3**

IUPAC Name: 1-[10-[2-Carboxy-5-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]phenyl]-9,9-dimethyl-7-[1-(3-fluoroazetidinyl)]-9-silaanthracen-2(9*H*)-ylidene]-3-fluoroazetidinium, inner salt

Description:

Key Information: Janelia Fluor® 635, NHS ester is a red fluorogenic fluorescent dye; supplied with an NHS ester reactive group for the labeling of primary amines. Suitable for live cell imaging. Application: Suitable for flow cytometry, confocal microscopy, super resolution microscopy (SRM) techniques including dSTORM (in both live and fixed cells). Cell permeable. Properties and Photophysical Data: NHS ester can be converted to relevant substrate for use in self-labeling tag systems, e.g. HaloTag® and SNAP-tag®. Excitation and emission maxima (λ) are 635 nm and 652 nm, respectively; quantum yield = 0.56; extinction ... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

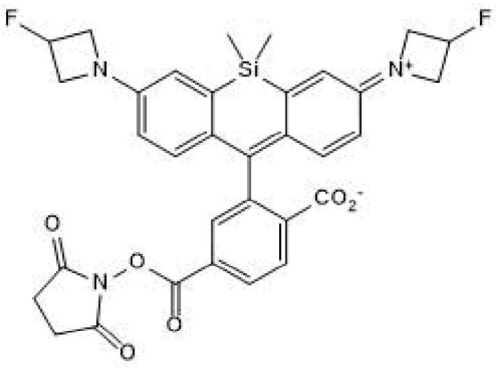
Batch Molecular Formula: $C_{33}H_{29}F_2N_3O_6Si$

Batch Molecular Weight: 629.69

Physical Appearance: Yellow solid

Minimum Purity: ≥95%

Batch Molecular Structure:



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:

DMSO to 100 mM

To measure the absorbance spectrum of this dye we recommend the following solvent: ethanol or trifluoroethanol plus 0.1% TFA.

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* (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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