

Certificate of Analysis

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Product Name: SiRA 2

Catalog No.: 7544

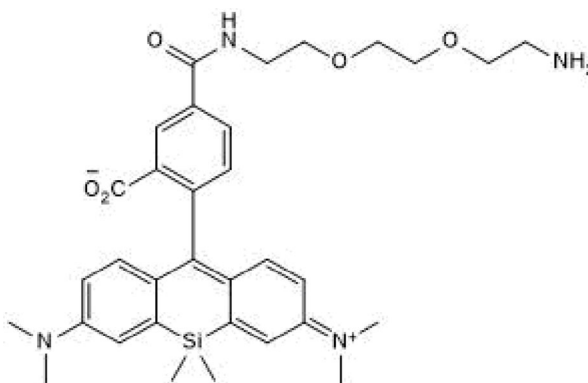
Batch No.: 1

CAS Number: 2365417-91-8

IUPAC Name: (5-((2-(2-(2-Aminoethoxy)ethoxy)ethyl)carbamoyl)-2-(7-(dimethylamino)-3-(dimethyliminio)-5,5-dimethyl-3,5-dihydrodibenzo[b,e]silin-10-yl)benzoate)

1. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------------------|------------------------------------------------------------------|
| Batch Molecular Formula: | C ₃₃ H ₄₂ N ₄ O ₅ Si |
| Batch Molecular Weight: | 602.81 |
| Physical Appearance: | Blue solid |
| Solubility: | DMSO to 100 mM water to 50 mM |
| Storage: | Store at -20°C |
| Batch Molecular Structure: | |



2. ANALYTICAL DATA

| | |
|---------------------------|------------------------------|
| HPLC: | Shows 96.9% purity at 656 nm |
| ¹H NMR: | Consistent with structure |
| Mass Spectrum: | Consistent with structure |
| UV Spectrum: | Consistent with structure |
| λ_{max}: | 647 nm (0.01M PBS pH 7.4) |
| λ_{ex}: | 649 nm (0.01M PBS pH 7.4) |
| λ_{em}: | 668 nm (0.01M PBS pH 7.4) |

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

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Description:

Key information: SiRA 2 (silicon rhodamine 2) is a near-infrared (NIR) fluorogen for SiRA light-up aptamer. SiRA 2 enables imaging of single RNA in living cells. Application: confocal microscopy, super resolution microscopy (SRM) techniques, including super-resolution stimulated emission depletion (STED). Cell permeable. Properties and Photophysical Data: SiRA 2 is extremely bright, photostable and allows the visualization of mRNA expression in bacteria in no-wash, quencher-free, live-cell imaging experiments. Excitation and emission maxima (λ) are 649 nM and 662 nM, respectively; quantum yield = 0.98; extinction coefficient = 86,000 M... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

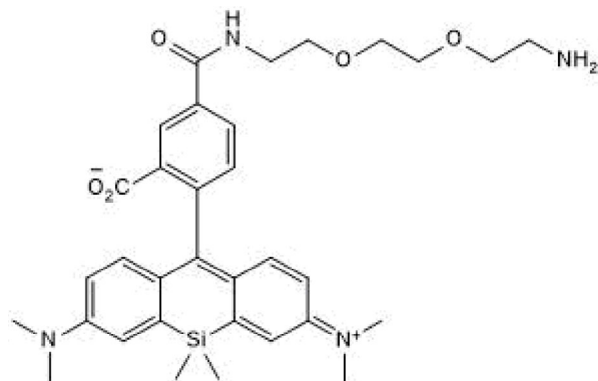
Batch Molecular Formula: C₃₃H₄₂N₄O₅Si

Batch Molecular Weight: 602.81

Physical Appearance: Blue solid

Minimum Purity: ≥90%

Batch Molecular Structure:



References:

Wirth *et al* (2019) SiRA: A silicon rhodamine-binding aptamer for live-cell super-resolution RNA imaging. *J.Am.Chem.Soc.* **141** 7562. PMID: 30986047.

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

water to 50 mM

This product 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 with kind permission of Prof. Andres Jäschke

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