

Product Name: Nucleic Acid Dye Green I

Catalog No.: 7246

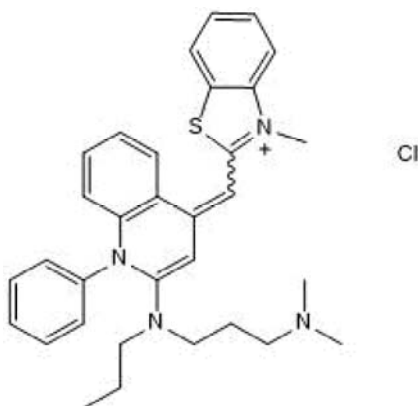
Batch No.: 1

CAS Number: 2225748-05-8

IUPAC Name: 2-((2-((3-(Dimethylamino)propyl)(propyl)amino)-1-phenylquinolin-4(1*H*)-ylidene)methyl)-3-methylbenzo[*d*]thiazol-3-ium chloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₃₂ H ₃₇ ClN ₄ S
Batch Molecular Weight:	545.19
Physical Appearance:	red/orange liquid
Solubility:	Soluble in DMSO (supplied as a 10,000x concentrate in DMSO)
Storage:	Store at -20°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows 99% purity
λ_{max}:	493 nm (methanol)

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

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Description:

Nucleic Acid Dye Green I is an asymmetric cyanine dye that specifically binds to dsDNA. Frequently used dye in qPCR and is further used as a stain for in-gel visualization of DNA. Also used in the detection of amplification products in Loop-Mediated Isothermal Amplification (LAMP) assays; this method has been used for the detection of SARS-CoV-2 virus. When bound to dsDNA the fluorescence intensity is 1000-fold greater than when in the unbound form. Does not require washing or de-staining steps. Compatible with all commonly used fluorescence detection systems. Excitation maximum = 495 nm; emission maximum = 520 nm. This product is sold as ... Please see product datasheet on www.tocris.com for full description.

Physical and Chemical Properties:

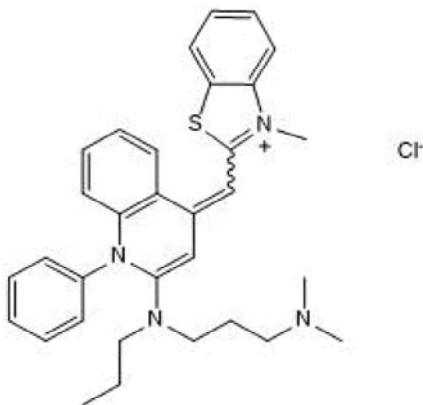
Batch Molecular Formula: C₃₂H₃₇ClN₄S

Batch Molecular Weight: 545.19

Physical Appearance: red/orange liquid

Minimum Purity: ≥95%

Batch Molecular Structure:



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:

Soluble in DMSO (supplied as a 10,000x concentrate in DMSO)

This dye is supplied as a 10,000x solution in DMSO. 0.5 mL of solution prepares 5 L of staining solution.

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.

References:

Lamb et al (2020) Rapid detection of novel coronavirus/Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) by reverse transcription-loop-mediated isothermal amplification PLoS One **15** e0234682. PMID: 32530929.

Lamb et al (2018) Rapid detection of Zika virus in urine samples and infected mosquitos by Reverse Transcription-Loop-Mediated Isothermal Amplification. Sci.Rep. **8** 3803. PMID: 29491389.

Bookout et al (2006) High-throughput real-time quantitative reverse transcription PCR. Curr.Protoc.Mol.Biol. doi: 10.1002/0471142. PMID: 18265376.

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