bio-techne
TOCRIS

Print Date: Mar 15th 2024

Certificate of Analysis

www.tocris.com

Product Name: **5-TAMRA NHS** **Catalog No.: 7665** **Batch No.: 1**

CAS Number: 150810-68-7

IUPAC Name: 2-[3-(Dimethylamino)-6-dimethylazaniumylidenexanthen-9-yl]-5-(2,5-dioxopyrrolidin-1-yl)oxycarbonylbenzoate

1. PHYSICAL AND CHEMICAL PROPERTIES

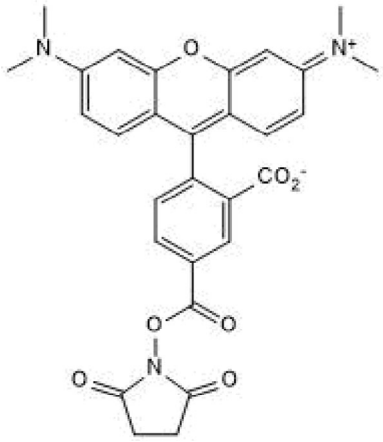
Batch Molecular Formula: $C_{29}H_{25}N_3O_7$

Batch Molecular Weight: 527.52

Physical Appearance: Purple solid

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 94.0% purity

UV Spectrum: Consistent with structure

λ_{max}: 546 nm (Methanol)

λ_{em}: 580 nm (Methanol)

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Description:

Key information: 5-TAMRA NHS is an orange fluorescent dye supplied with an NHS ester reactive group for the labeling of primary amines. Can be used for oligonucleotide labeling. Application: Suitable for fluorescence microscopy, confocal microscopy, FRET acceptor for FAM. Properties and Photophysical Data: Excitation and emission maxima (λ) are 546 nm and 580 nm, respectively; quantum yield = 0.1; extinction coefficient = 95,000 $M^{-1}cm^{-1}$; A280 = 0.178.Please see the protocol for further information on protein/antibody labeling and conjugation. It is recommended to prepare stock solutions in DMSO. Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

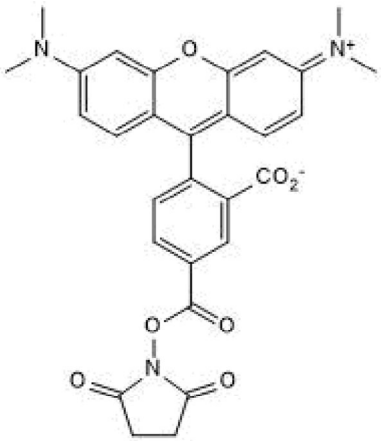
Batch Molecular Formula: $C_{29}H_{25}N_3O_7$

Batch Molecular Weight: 527.52

Physical Appearance: Purple solid

Minimum Purity: ≥90%

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.

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.

References:

Hirata *et al* (2014) Structural evaluation of tandem hairpin pyrrole-imidazole polyamides recognizing human telomeres. J.Am.Chem.Soc. ***136*** 11546. PMID: 25036716.

Kvach *et al* (2009) Practical synthesis of isomerically pure 5- and 6-carboxytetramethylrhodamines, useful dyes for DNA probes. Bioconjug.Chem. ***20*** 1673. PMID: 19606815.

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