

## **Lumiprobe Corporation**

201 International Circle, Suite 135 Hunt Valley, Maryland 21030

**USA** 

Phone: +1 888 973 6353 Fax: +1 888 973 6354 Email: order@lumiprobe.com

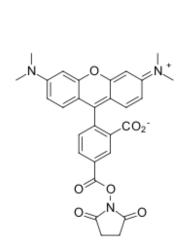
## **TAMRA NHS ester, 5-isomer**

http://www.lumiprobe.com/p/tamra-nhs-ester-5

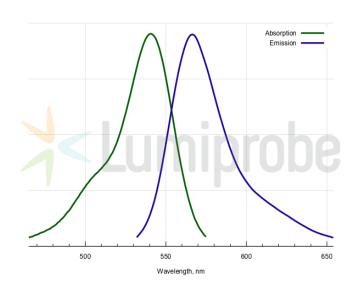
TAMRA (tetramethylrhodamine) is a xanthene dye of rhodamine series. This fluorophore has been used for quite a long time for the preparation of dual-labeled qPCR TagMan oligonucleotide probes containing TAMRA and fluorescein (FAM).

Like many other xanthene fluorophores, TAMRA is available as two isomers (5- and 6-isomer) with nearly identical optical properties. This product is an isomerically pure 5-TAMRA.

TAMRA NHS is an amine-reactive reagent. It can be used to label proteins, peptides, and modified oligonucleotides containing amine groups.



**Structure of 5-TAMRA NHS ester** 



Absorption and emission spectra of 5-TAMRA

## **General properties**

Appearance: dark colored solid

 $\begin{tabular}{lll} Molecular weight: & 527.53 \\ CAS number: & 321862-17-3 \\ Molecular formula: & $C_{29}H_{25}N_3O_7$ \\ \end{tabular}$ 

IUPAC name: (2,5-dioxopyrrolidin-1-yl) 3',6'-bis(dimethylamino)-3-oxospiro[2-benzofuran-1,9'-xanthene]-5-

carboxylate

Solubility: good in DMF, DMSO, low in water

Quality control: NMR <sup>1</sup>H, HPLC-MS (95%)

Storage conditions: Storage: 12 months after receipt at -20°C in the dark. Transportation: at room temperature

for up to 3 weeks. Avoid prolonged exposure to light. Desiccate.

## Spectral properties

Excitation/absorption 541

maximum, nm:

ε, L·mol<sup>-1</sup>·cm<sup>-1</sup>: 84000 Emission maximum, nm: 567 Fluorescence quantum yield: 0.1

 $CF_{260}$ : 0.32  $CF_{280}$ : 0.19