

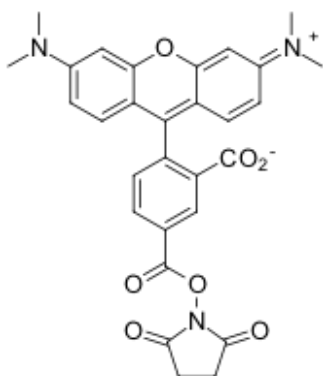
## TAMRA NHS ester, 5-isomer

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

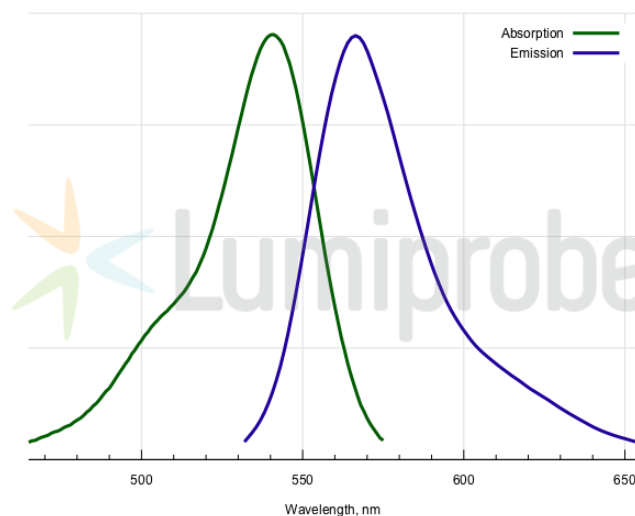
TAMRA (tetramethylrhodamine) is a xanthene dye of rhodamine series. This fluorophore has been used for quite a long time for the preparation of dual-labeled qPCR TaqMan oligonucleotide probes containing TAMRA and fluorescein (FAM).

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   |
| Molecular weight:   | 527.53   |
| CAS number:         | 321862-17-3  |
| Molecular formula:  | C <sub>29</sub> H <sub>25</sub> N <sub>3</sub> O <sub>7</sub>  |
| 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.  |
| Legal statement:    | This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products. |

### Spectral properties

|  |       |
|--|-------|
| Excitation/absorption maximum, nm:         | 541   |
| ε, L·mol <sup>-1</sup> ·cm <sup>-1</sup> : | 84000 |
| Emission maximum, nm:                      | 567   |

Fluorescence quantum yield: 0.1

CF<sub>260</sub>: 0.32

CF<sub>280</sub>: 0.19