

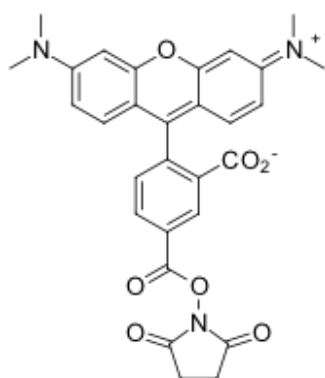
## TAMRA NHS ester, 5-isomer

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

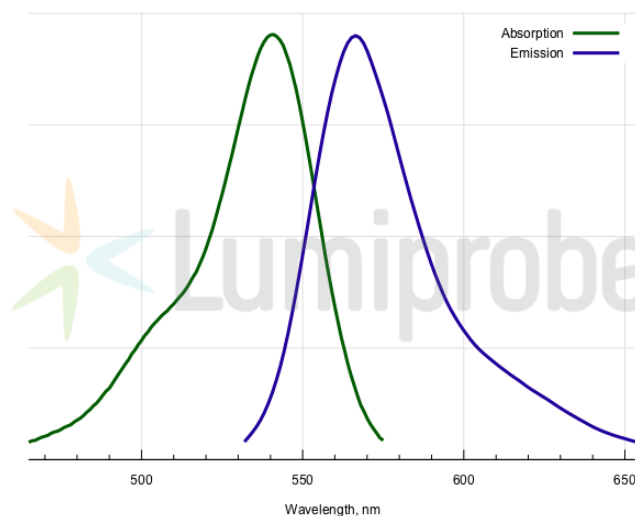
TAMRA (tetramethylrhodamine) is a xanthene dye of rhodamine series. This fluorophore has been used for quite a long time for the preparation of dual-labeled qPCR TaqMan oligonucleotide probes containing TAMRA and fluorescein (FAM).

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.

### 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