

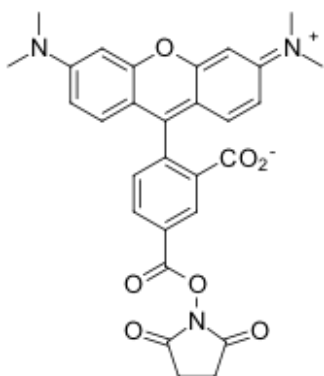
TAMRA NHS ester, 5-isomer

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

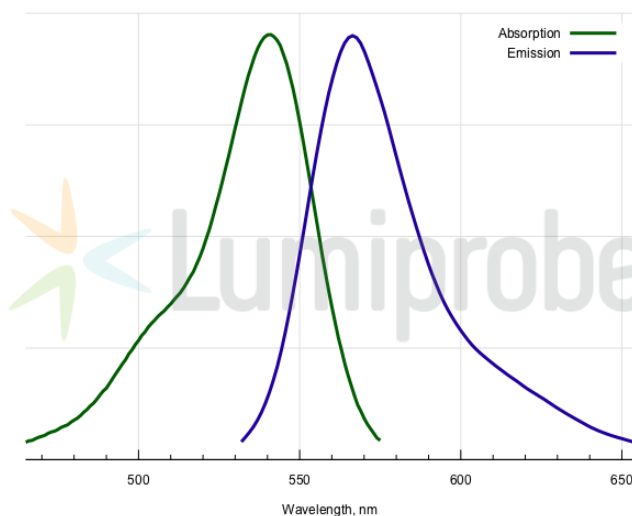
TAMRA (tetramethylrhodamine) is a xanthene dye of rhodamine series. This fluorophore has been used for quite a long time for the preparation of dual-labeled qPCR TaqMan oligonucleotide probes containing TAMRA and fluorescein (FAM).

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 ₂₉ H ₂₅ N ₃ O ₇ |
| 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 ¹ 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 ⁻¹ ·cm ⁻¹ : | 84000 |
| Emission maximum, nm: | 567 |
| Fluorescence quantum yield: | 0.1 |
| CF ₂₆₀ : | 0.32 |
| CF ₂₈₀ : | 0.19 |