

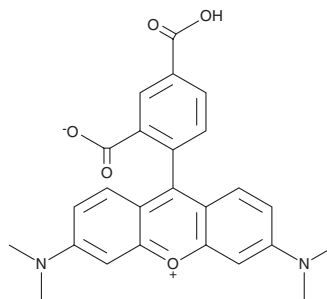
# PRODUCT INFORMATION



## 5-Carboxytetramethylrhodamine

Item No. 34598

<b>CAS Registry No.:</b>	91809-66-4
<b>Formal Name:</b>	9-(2,4-dicarboxyphenyl)-3,6-bis(dimethylamino)-xanthylium, inner salt
<b>Synonym:</b>	5-TAMRA
<b>MF:</b>	C <sub>25</sub> H <sub>22</sub> N <sub>2</sub> O <sub>5</sub>
<b>FW:</b>	430.5
<b>Purity:</b>	≥98%
<b>Ex./Em. Max:</b>	546/580 nm
<b>UV/Vis.:</b>	λ <sub>max</sub> : 550 nm
<b>Supplied as:</b>	A solid
<b>Storage:</b>	-20°C
<b>Stability:</b>	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

5-Carboxytetramethylrhodamine is supplied as a solid. A stock solution may be made by dissolving the 5-carboxytetramethylrhodamine in the solvent of choice, which should be purged with an inert gas. 5-Carboxytetramethylrhodamine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 5-carboxytetramethylrhodamine in these solvents is approximately 1 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 5-carboxytetramethylrhodamine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 5-carboxytetramethylrhodamine in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

5-Carboxytetramethylrhodamine is a fluorescent dye that has commonly been used for the covalent labeling of oligonucleotides for DNA analysis.<sup>1</sup> It displays excitation and emission maxima of 546 and 580 nm, respectively.<sup>2</sup> 5-Carboxytetramethylrhodamine has also been used in various fluorescence polarization assays and protein FRET experiments.<sup>2,3</sup>

### References

1. Kvach, M.V., Stepanova, I.A., Prokhorenko, I.A., *et al.* Practical synthesis of isomerically pure 5- and 6-carboxytetramethylrhodamines, useful dyes for DNA probes. *Bioconjug. Chem.* **20(8)**, 1673-1682 (2009).
2. Qi, J., Oppenheimer, M., and Sobrado, P. Fluorescence polarization binding assay for *Aspergillus fumigatus* virulence factor UDP-galactopyranose mutase. *Enzyme Res.* 513905 (2011).
3. Casiraghi, A., Longhena, F., Straniero, V., *et al.* Design and synthesis of fluorescent-methylphenidate analogues for FRET-based assay of synapsin III binding. *ChemMedChem* **15(14)**, 1330-1337 (2020).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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