

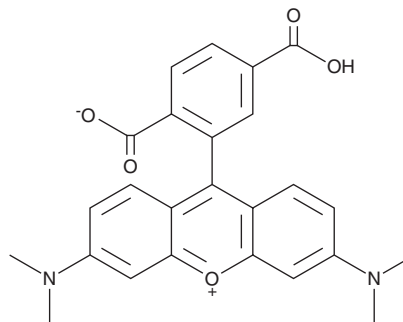
PRODUCT INFORMATION



6-Carboxytetramethylrhodamine

Item No. 29046

CAS Registry No.: 91809-67-5
Formal Name: 9-(2,5-dicarboxyphenyl)-3,6-bis(dimethylamino)-xanthylium, inner salt
Synonym: 6-TAMRA
MF: C₂₅H₂₂N₂O₅
FW: 430.5
Purity: ≥95%
Ex./Em. Max: 543/572 nm
UV/Vis.: λ_{max}: 253, 353, 546 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

6-Carboxytetramethylrhodamine is supplied as a solid. A stock solution may be made by dissolving the 6-carboxytetramethylrhodamine in the solvent of choice, which should be purged with an inert gas. 6-Carboxytetramethylrhodamine is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of 6-carboxytetramethylrhodamine in these solvents is approximately 1 and 2 mg/ml, respectively.

6-Carboxytetramethylrhodamine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 6-carboxytetramethylrhodamine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 6-Carboxytetramethylrhodamine has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

6-Carboxytetramethylrhodamine is a fluorescent dye that has commonly been used for the covalent labeling of oligonucleotides for DNA analysis.^{1,2} It displays excitation/emission maxima of 543/572 nm, respectively. 6-Carboxytetramethylrhodamine has been used in various DNA-protein binding studies, DNA FRET experiments, and as a standard reporter or quencher dye in RT-PCR.

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. Han, C., Chen, T., and Zu, L. Terbium chelate as donor label in time-resolved fluorescence energy transfer study of DNA hybridization. *Chem. Phys. Lett.* **500(4-6)**, 323-326 (2010).

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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