

TET phosphoramidite, 6-isomer

<http://www.lumiprobe.com/p/tet-amidite>

TET phosphoramidite for synthesis of fluorescently labeled oligonucleotides, pure 6-isomer.

TET (tetrachlorofluorescein) is a green-fluorescent fluorescein derivate (absorption maximum at 519 nm, emission maximum at 535 nm).

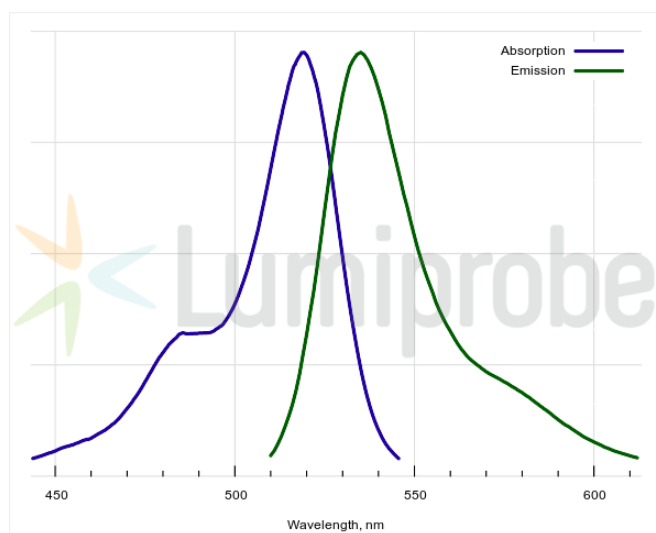
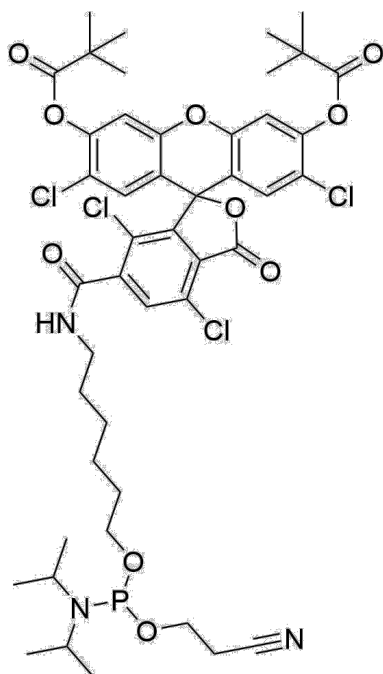
TET phosphoramidite is used for synthesis of fluorescently-labeled primers and hybridization probes for qPCR. TET can be used with DusQ1 fluorescence quencher (can be used with 500 Å [DusQ1 CPG 500](#)).

5'-labeled primers are used with non-labeled reverse primers for microsatellite amplification via PCR followed by fragment analysis. TET-labeled amplification products can be analyzed using various sequencers for capillary electrophoresis, including ABI PRISM® 310 Genetic Analyzer.

Recommendations for using the reagent:

Condensation: 3 min.

Deprotection: standard conditions with 25% ammonium hydroxide; deprotection time depends on oligonucleotide composition and nucleobase protecting groups (deprotection for 17 hours at 55°C removes all protecting groups from standard nucleobases). AMA (solution of 30% ammonium hydroxide/40% aqueous methylamine 1:1 v/v) can be used with ~5% non-fluorescent side product forming. To avoid formation of the side product, start deprotection with ammonium hydroxide (30 min at room temperature), then add an equal volume of 40% aqueous methylamine and continue deprotection as required with AMA (10 min at 65°C).



Absorption and emission spectra of TET

General properties

Appearance:	white solid foam
Molecular weight:	981.72
CAS number:	877049-90-6
Molecular formula:	C ₂₆ H ₅₄ N ₃ Cl ₄ O ₁₀ P
IUPAC name:	2',4,7,7'-tetrachloro-6-(((2-cyanoethoxy)(diisopropylamino)phosphaneyloxy)hexyl)carbamoyl]-3-oxo-3H-spiro[isobenzofuran-1,9'-xanthene]-3',6'-diyl bis(2,2-dimethylpropanoate)
Solubility:	Good solubility in acetonitrile and DCM
Quality control:	NMR ¹ H and ³¹ P, 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.

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Spectral properties

Excitation/absorption maximum, nm: 519
 ϵ , L·mol⁻¹·cm⁻¹: 100000
Emission maximum, nm: 535
Fluorescence quantum yield: 0.47
CF₂₆₀: 0.17
CF₂₈₀: 0.09

Oligo synthesis details

Diluent: anhydrous acetonitrile (prepare a 0.1 M solution, storage 1 week).