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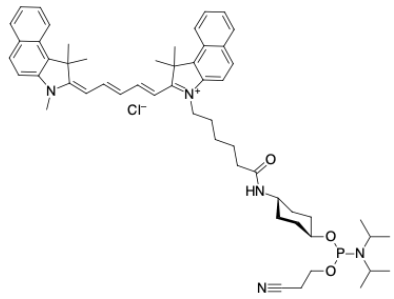
Cyanine5.5 phosphoramidite

http://www.lumiprobe.com/p/cyanine55-phosphoramidite-5

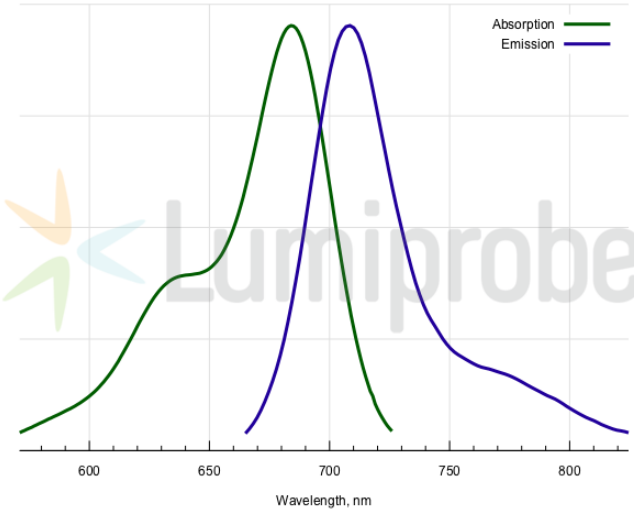
Cyanine5.5 is a fluorophore with an emission in the far-red range of the spectrum. This dye is useful for multiplex qPCR. Commercial six-channel qPCR instruments often have a channel for Cyanine5.5.

This phosphoramidite can be used for the synthesis of 5'-labeled oligonucleotides by direct labeling in an oligonucleotide synthesizer.

The structure of the phosphoramidite functional group that is attached to a secondary carbon atom provides extra stability against Arbuzov rearrangement. This helps maintain coupling performance over a longer storage time in oligonucleotide synthesizers, compared to phosphoramidites derived from primary alcohols.



Structure of Cyanine55 phosphoramidite



Absorption and emission spectra of Cyanine5.5

General properties

Appearance:	dark colored solid
Molecular weight:	916.61
Molecular formula:	$C_{55}H_{71}N_5ClO_3P$
Quality control:	NMR ^{1}H, ^{31}P, HPLC-MS (85%)
Storage conditions:	Storage: 12 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Avoid prolonged exposure to light. Desiccate.
Legal statement:	This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.

Spectral properties

Excitation/absorption maximum, nm:	694
ε, $L \cdot mol^{-1} \cdot cm^{-1}$:	198000
Emission maximum, nm:	710
Fluorescence quantum yield:	0.2
CF_{260}:	0.07
CF_{280}:	0.03

Oligo synthesis details

Diluent:	acetonitrile
Coupling conditions:	6 min coupling time recommended
Deprotection conditions:	recommended 48 h at +4°C or ultramild protective groups; 24 h at rt possible