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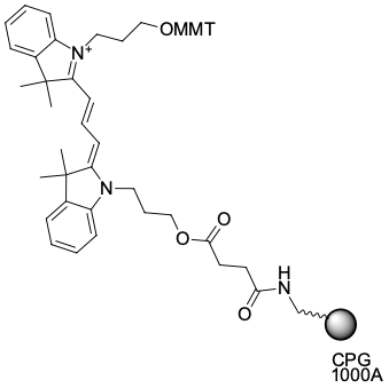
Cyanine3 CPG 1000

http://www.lumiprobe.com/p/cy3-cpg-1000

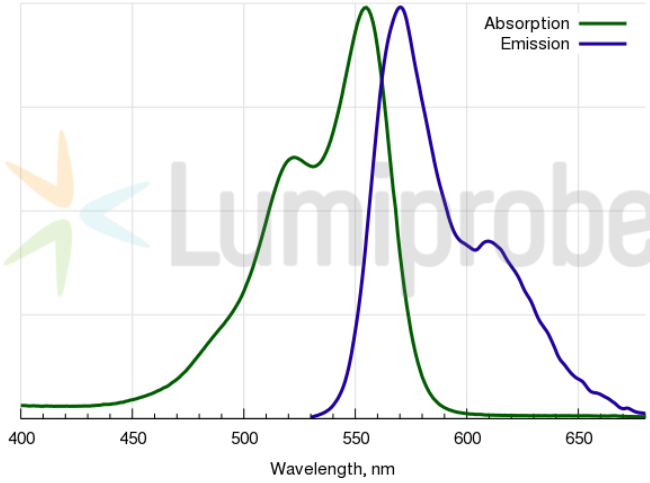
Cyanine3 CPG 1000 is a controlled-pore glass (CPG) with a Cyanine3 dye covalently attached via a linker. The support is intended for the automated solid-phase synthesis of oligonucleotides using the phosphoramidite method. Its use allows for obtaining an oligonucleotide with a fluorescent label at the 3′-end without additional post-synthetic labeling steps.

The pore size of 1000 Å is optimal for synthesizing long oligonucleotide chains, up to 120 nucleotides in length. Cyanine3 (Cy3®) is a bright fluorescent dye in the orange-red spectral region with an absorption maximum at 555 nm and an emission maximum around 570 nm.

Oligonucleotides synthesized using this reagent can be used in molecular biology methods such as real-time PCR (qPCR), fluorescent *in situ* hybridization (FISH), FRET, and surface-enhanced Raman spectroscopy (SERS).



Structure of Cyanine3 CPG 1000



Cyanine3 absorbance and emission spectra

General properties

Appearance:	pink beads
Quality control:	NMR ^{1}H and loading measurement, functional testing in oligo synthesis.
Storage conditions:	24 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. 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:	555
ε, L·mol^{-1}·cm^{-1}:	150000
Emission maximum, nm:	570
Fluorescence quantum yield:	0.31
CF_{260}:	0.04
CF_{280}:	0.09

Oligo synthesis details

Pore size, Å:	1000
Typical loading, umol/g:	25-40

Coupling conditions:	standard coupling, identical to normal nucleobases
Cleavage conditions:	ammonia, 2 h at room temperature. DO NOT use AMA mixture!
Deprotection conditions:	identical to protected nucleobases