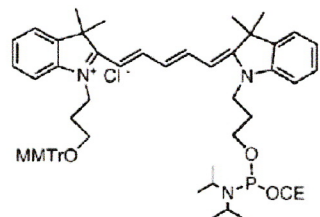


Conventional Cyanines & TAMRA dyes (Cyanine dyes phosphoramidites and Solid Support)

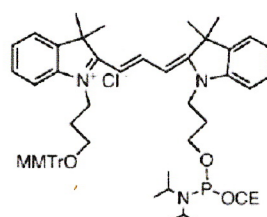
ChemGenes Corporation now offers ultra pure Cyanine dyes phosphoramidites and solid supports.

Cyanine 650 Amidite



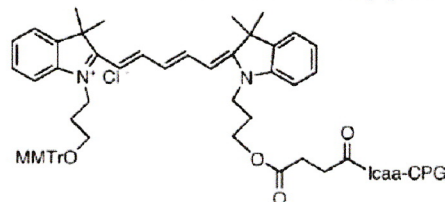
Cyanine 650 Amidite Catalog# CLP-9800

Cyanine 550 Amidite



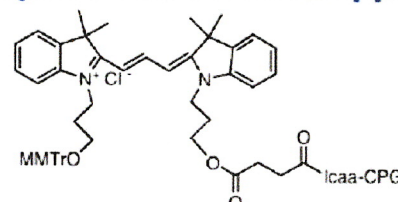
Cyanine 550 Amidite Catalog# CLP-1528

Cyanine 650 Solid Supports



Cyanine 650 Icaa CPG Catalog# N-9910-05

Cyanine 550 Solid Supports



Cyanine 550 Icaa CPG Catalog# N-1538-05

Applications of cyanine Dyes, Cyanine 3 and Cyanine 5- Phosphoramidites:

A cyanobacterium stained green with cyanine dye Cyanine dyes are used to label proteins, antibodies, peptides, nucleic acid probes, and any kind of other biomolecules to be used in a variety of fluorescence detection techniques: Flow cytometry, Microscopy (mainly Visible range, but also UV, IR), Microplate assays, Microarrays, as well as "light-up Probes".

Nucleic Acid Labeling

In microarray experiments DNA or RNA is labeled with either Cyanine 3 or Cyanine 5 that has been synthesized to carry an N-hydroxy-succinimidyl ester (NHS-ester) reactive group or a phosphoramidite. Since NHS-esters react readily only with aliphatic amine groups, which nucleic acids lack, nucleotides have to be modified with aminoallyl groups. This is done through incorporating aminoallyl-modified nucleotides during synthesis reactions. Phosphoramidites will label hydroxyl group at specific position of nucleoside of a defined sequence. A good ratio is a label every 60 bases such that the labels are not too close to each other, which would result in quenching effects. **ChemGenes also offers Cyanine 650 and Cyanine 550 NHS-ester.**

Protein labeling

For protein labeling, Cyanine 3 and Cyanine 5 dyes sometimes bear a succinimidyl group to react with amines, or a maleimide group to react with a sulfhydryl group of cysteine residues.

Cyanine 5 is sensitive to the electronic environment it resides in. Changes in the conformation of the protein it is attached to will produce either enhancement or quenching of the emission. The rate of this change can be measured to determine enzyme kinetic parameters. The dyes can be used for similar purposes in FRET experiments.

Quality data of Cyanine 650 & 550:

- HPLC Purity >90% (Both Cyanine 650 & Cyanine 550)
- ³¹P NMR Purity >95% (Both Cyanine 650 & Cyanine 550)