Lumiprobe Corporation
115 Airport Dr Suite 160
Westminster, Maryland 21157
USA
Phone: +1 888 973 6353
Fax: +1 888 973 6354
Email: order@lumiprobe.com

R6G phosphoramidite, 6-isomer

http://www.lumiprobe.com/p/6-r6g-phosphoramidite

R6G phosphoramidite for oligonucleotide synthesis, pure 6-isomer.

R6G (rhodamine 6G) is a xanthene dye of the rhodamine family with high fluorescence quantum yield and high molar extinction coefficient. Relative to those of fluorescein, the absorption (518 nm) and emission (542 nm) maxima of 6-R6G are shifted into the long-wave region.

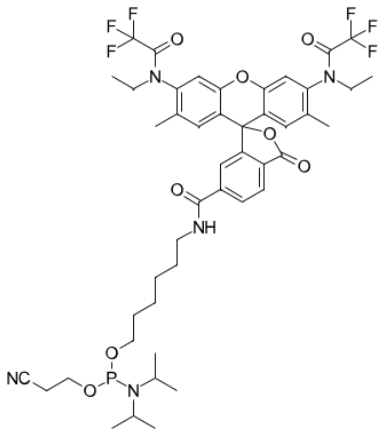
R6G can be used as a FRET acceptor in DNA-sequencing and in short tandem repeat (STR) analysis. The dye is commonly used for producing TaqMan probes for quantitative PCR. In comparison with HEX and JOE dyes, R6G in combination with BHQ1 quencher has stronger quenching in molecular beacon probes, significantly reducing background fluorescence in PCR.

Usage:

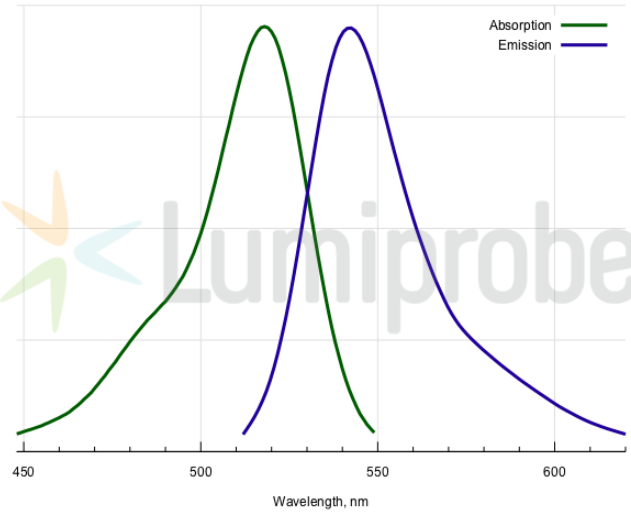
Coupling: 10 minutes.

Deprotection: solution of tert-Butylamine in water (1:3 v/v) overnight at 55°C.

Aqueous ammonia and AMA (solution of 30% ammonium hydroxide/40% aqueous methylamine 1:1 v/v) must NOT be used for deprotection of the modified oligonucleotide from the solid-phase support because of complete and irreversible R6G degradation.



Structure of R6G Phosphoramidite



Absorption and emission spectra of 6-R6G

General properties	
Appearance:	yellowish powder
Molecular weight:	949.93
CAS number:	1355330-47-0
Molecular formula:	$C_{46}H_{54}F_6N_5O_8P$
Solubility:	good in DCM, acetonitrile
Quality control:	NMR ^{1}H and ^{31}P, HPLC-MS (95+%), isomeric purity > 97%
Storage conditions:	Storage: 12 months after receival at -20°C in the dark. Transportation: at room temperature for up to 2 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:	518
ε, $L \cdot mol^{-1} \cdot cm^{-1}$:	116000
Emission maximum, nm:	542
Fluorescence quantum yield:	0.95
CF_{260}:	0.18
CF_{280}:	0.17

Oligo synthesis details

Diluent:	acetonitrile