
TAMRA CPG 1000, 6-isomer

<http://www.lumiprobe.com/p/tamra-cpg-1000-6>

6-TAMRA CPG (glycerol) is controlled pore glass (CPG) with the fluorescent dye 6-carboxytetramethylrhodamine (6-TAMRA) covalently attached via a glycerol linker. This support is designed for automated solid-phase oligonucleotide synthesis using the phosphoramidite method, allowing the introduction of a fluorescent label at the 3'-end without additional post-synthetic labeling steps.

The 1000 Å pore size is optimal for synthesizing long sequences — up to 100 nucleotides. 6-TAMRA is an orange-red fluorescent dye with absorption and emission maxima at 541 nm and 567 nm, respectively, and is widely used in molecular diagnostics. TAMRA-labeled oligonucleotides obtained with this reagent are employed in methods such as real-time PCR, fluorescence in situ hybridization (FISH), FRET, and surface-enhanced Raman spectroscopy (SERS).

General properties

Appearance:	deep pink beads
Quality control:	NMR ¹ H and loading measurement, functional testing in oligo synthesis.
Storage conditions:	24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate. Avoid prolonged exposure to light.
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:	541
ϵ , L·mol ⁻¹ ·cm ⁻¹ :	84000
Emission maximum, nm:	567
Fluorescence quantum yield:	0.1
CF ₂₆₀ :	0.32
CF ₂₈₀ :	0.19

Oligo synthesis details

Pore size, Å:	1000
Typical loading, $\mu\text{mol/g}$:	30-40
Coupling conditions:	standard time depending on the first monomer
Cleavage conditions:	tert-butylamine : methanol : water 1 : 1 : 3 (v/v/v) («TAMRA cocktail») for 6 h at 60 °C, then cool down to room temperature.