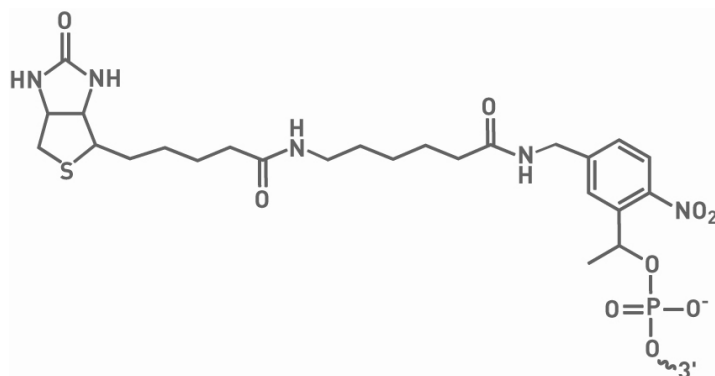


PC Biotin

Structure



Key data

5' MW: 597.6 g/mol

Requires HPLC purification

Properties

PC Biotin products a photocleavable spacer between the biotin group and the DNA bases. Optimal cleavage is obtained with exposure to long-wave UV light in the 300-350 nm spectral range. Cleavage releases the oligo with a 5'-phosphate group.

Biotin-modified oligos bind tightly to streptavidin. The streptavidin can be labeled with fluorescent dyes and enzymes or mediate attachment to a solid surface. A variety of molecular biology assays and purification methods employ biotin. Biotin can be added to the 5'- or 3'-ends of an oligo using either a C6 (standard) or TEG (tetra-ethyleneglycol, 15 atom) spacer arm. 5' Biotin-TEG requires purification. For some application, especially those performed on a solid surface, a long linker can be beneficial in order to avoid undesirable steric interactions from the crowded surface.ⁱ Internal biotin modification can be introduced using a biotin dT base, which also requires additional purification.

ⁱ EM. Southern, K. Mir, MS. Shchepinov "Molecular Interactions on microarrays" *Nat. Genet.* **1999**, (21): Suppl. 1, 5-9