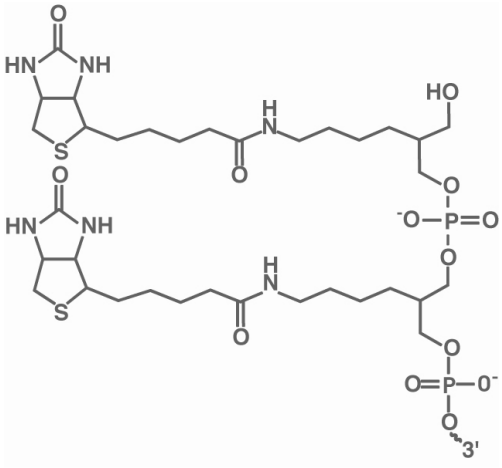
Dual Biotin

Structure



Key data

5′ MW: 871 g/mol

Requires HPLC purification

Properties

Two biotin groups are sequentially placed on the 5'-end, which increases the efficiency of streptavidin binding. Dual Biotin is commonly employed in SAGE™ protocols.

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