



photoreactive linkers

specific release of biomolecules

# Cleavable linkers for oligonucleotides

## Photoreactive linkers

Photoreactive linkers allow targeted release of biomolecules at particular time. Here, the binding is cleaved by an external, non-invasive light pulse (UV light 300-400 nm), which release the molecule.

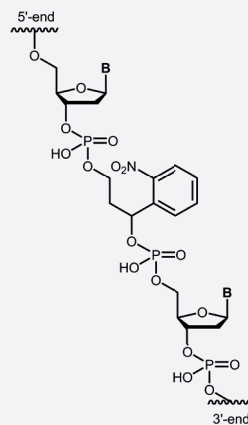
Using the "photocleavable" linkers (PC linkers), for example, organic substrates can be coupled to solid phases or other biomolecules. Especially in so-called photo-induced hybridisation approaches, photocleavable linkers are commonly used.

<b>Purification:</b>	RP-HPLC
<b>Quality control:</b>	Maldi-TOF MS
<b>Modification:</b>	5'-Terminus, internal

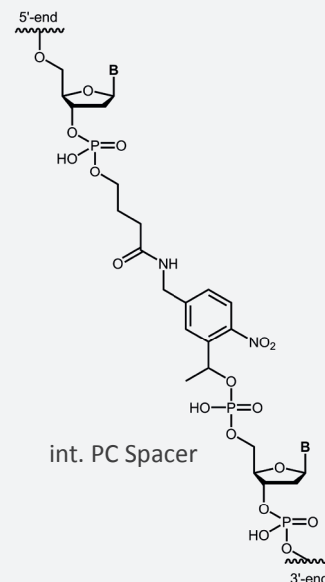


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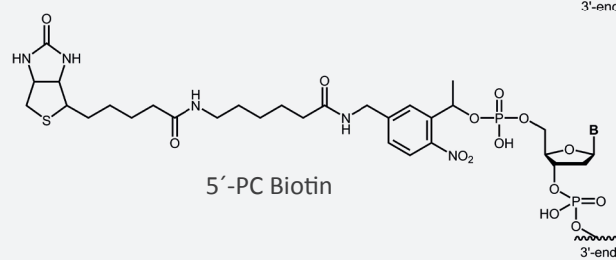
Photoreactive linkers with a so-called nitrobenzyl group (N=O double bond) are most frequently used for the spatially and temporally precisely controlled cleavage. For the linkage with oligonucleotides, various photocleavable linkers are available:



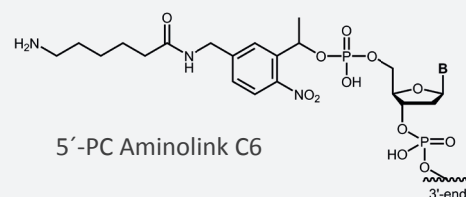
int. PC Linker



int. PC Spacer



5'-PC Biotin



5'-PC Aminolink C6

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photoreactive linkers

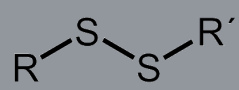
specific release of biomolecules

# Cleavable linkers for oligonucleotides

## Disulfide bridges

Disulfide bridges naturally play an important role in the maintenance of protein structures. In contrast, within an oligo sequence, a disulfide bridge represents a cleavable site in the sequence that can be split under reductive conditions (TCEP, DTT). In this way, for example, a correspondingly attached functional group can be released.

- Purification:** RP-HPLC
- Quality control:** Maldi-TOF MS
- Modification:** 5'-/3'-Terminus, internal



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In addition to functioning as an internal "breaking point" within an oligo sequence, disulfide bridges can also carry other modifications (e.g. haptens, dyes, etc.) which can be cleaved off appropriately.

