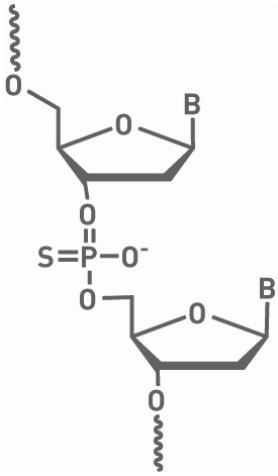
Phosphorthioate Bonds

Structure



Properties

The phosphorothioate (PS) bond substitutes a sulfur atom for a non-bridging oxygen in the phosphate backbone of an oligo. This modification renders the internucleotide linkage resistant to nuclease degradation. Phosphorothioates can be introduced at either the 5'- or 3'-end of the oligo to inhibit exonuclease degradation. In antisense oligonucleotides, phosphorothioates are also introduced internally to limit attack by endonucleases.