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A-DNA

National Cancer Institute

Source

National Cancer Institute. *A-DNA*. NCI Thesaurus. Code C13186.

A-DNA is a shorter and wider helix than B-DNA. Most RNA and RNA-DNA duplex are in this form. While deep, narrow major groove is not easily accessible to proteins but wide, shallow minor groove is accessible to proteins but with lower information content than major groove. A-DNA is the favored conformation at low water concentrations. Base pairs are tilted to helix axis and displaced from axis and sugar pucker is C3'-endo (in RNA 2'-OH inhibits C2'-endo conformation). When examined from the top of the helix, there is a large hole in the middle, the sugar phosphate backbone is at the edge of the helix, and the bases are displaced towards the edge.