



Product Specifications

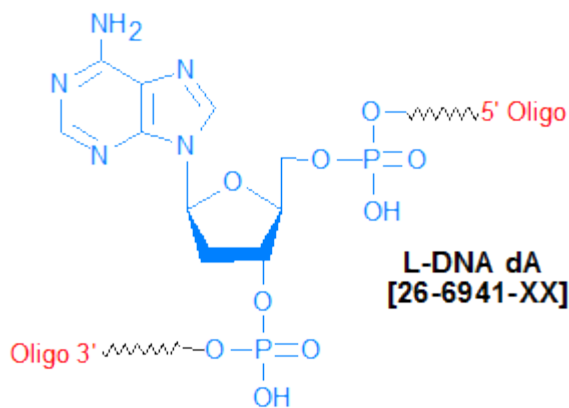
Custom Oligo Synthesis, antisense oligos, RNA oligos, chimeric oligos, Fluorescent dyes, Affinity Ligands, Spacers & Linkers, Duplex Stabilizers, Minor bases, labeled oligos, Molecular Beacons, siRNA, phosphonates Locked Nucleic Acids (LNA); 2'-5' linked Oligos

Oligo Modifications

For research use only. Not for use in diagnostic procedures for clinical purposes.

L-DNA Bases

Category	Others
Modification Code	L-dN
Reference Catalog Number	26-6940
5 Prime	Y
3 Prime	Y
Internal	Y
Molecular Weight(mw)	330.23



L-DNA (beta stereoisomer deoxyribose that is same as in D-DNA) is the left-turning and mirror image version of natural DNA, as opposed to the naturally occurring right-turning version called D-DNA. L-DNA is more stable than D-DNA to enzymatic degradation by certain nucleases (1). Since the two enantiomers are identical in structure other than their chiral differences, their intrinsic physical properties are generally equal to each other. This includes duplex stability, solubility, and selectivity as D-DNA but form a left-helical double-helix. Because of its chiral difference, L-DNA does not bind to its naturally occurring D-DNA counterpart.

One important aspect of L-DNA is that it is poor at hybridizing to D-DNA (2). This confers multiple uses, one being that the incorporation of L-DNA into the stem of a molecular beacon as it allows stem invasion to be avoided (3). Other areas that it can play an important role in would be zip-code microarrays (2) and as molecular tags for PCR (4). When used in nanocarriers, L-DNA has greater cellular uptake as well as greater serum stability. It is good for also reducing interaction between aptamers and nanocarrier skeletons (5).

Gene Link synthesizes L-DNA oligos with any combination of D-DNA bases including fluorescent dyes and all other available modifications.