Product Specifications

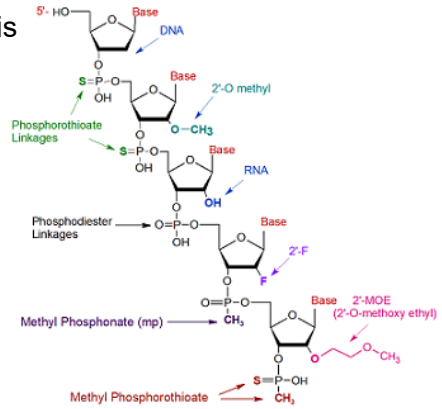
Custom Oligo Synthesis, antisense oligos, RNA oligos, chimeric oligos, Fluorescent dyes, Affinity Ligands, Spacers & Linkers, Duplex Stabilizers, Minor bases, labeled oligos, Molecular Beacons, siRNA, phosphonates Locked Nucleic Acids (LNA); 2′-5′ linked Oligos

Oligo Modifications

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

Chimeric Linkage

Category	RNA Oligo Synthesis
Modification Code	Ch-Lnk
Reference Catalog Number	27-6420
5 Prime	Y
3 Prime	Y
Internal	Y
Molecular Weight(mw)	0



RNA and 2'-O-methyl RNA oligonucleotide synthesis is performed at Gene Link using the beta cyanoethyl chemistry and state of the art synthesizers. These involve proprietary software protocols with long coupling times and specialized cycles to obtain ultra clean oligos. Chimeric linkage is referred to when an oligo type is mixed with another oligo type; oligo types are primarily defined as DNA, RNA, phosphorothioate, phosphonates etc. If a DNA oligo sequence is combined with RNA bases or other non-DNA base type or with a non-phosphodiester linkage it is considered a chimeric oligo.
Particularly RNA oligos are susceptible to degradation to the same extent as native RNA extracted from various sources. An attractive alternate to prevent degradation from nucleases is the use of 2'-Fluoro bases, MOE and 2'-O-methyl RNA bases when specific 2'OH is not required. The 2'-fluoro bases and 2'-O methyl oligonucleotides confer considerable nuclease resistance and are similar in hydrogen bonding properties to RNA/RNA than the lower RNA/DNA binding property. The coupling efficiency of 2'-F bases and 2'-O methyl phosphoramidites are also higher than the RNA monomers resulting in higher yield of full length oligos.

Gene Link also offers custom synthesis of RNA and DNA chimeric oligos with investigator specified ribo or deoxy bases or 2'-F or 2'-O methyl bases. The chimeric oligos can also be synthesized with the regular phoshodiester bonds or substituted with phosphorothioate linkages. The combination of these modified RNA bases with phosphorothioate internucleotide linkages imparts these oligos greater nuclease resistance which is particularly useful for antisense studies.Custom phosphorothioate oligonucleotides synthesized by Gene Link can be specified to have all the diester bonds substituted or only some selected diester linkages depending upon the researchers experimental requirement. Substitution of all diester linkage is recommended to provide greater nuclease resistance.