

Oligo-Synthesis @ Silantes GmbH

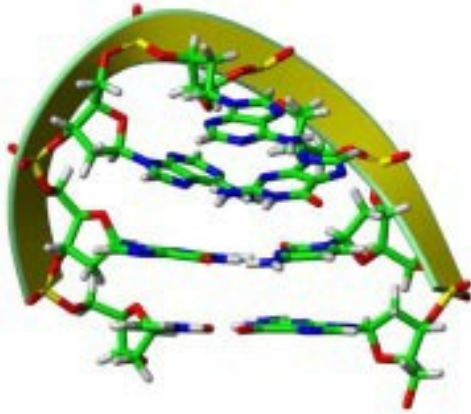


Fig. 1: Solution structure of d(GCGAAGC) hairpin refined using an extensive set of residual dipolar couplings obtained on a ^{13}C ^{15}N labeled sample in an oriented medium. (Structure and data of Fig. 2 were kindly provided by Prof. Sklenar, Masaryk University)

Silantes offers the service to synthesis RNA and DNA fragments labeled with the stable isotopes ^2H , ^{13}C , ^{15}N and combinations thereof. The labeling is uniform. But nucleotide-specific labeling is possible on request.

Please send the sequence (5'-----3'), the type of oligonucleotide (DNA or RNA) and the requested label.

Silantes' expert will inspect the sequence and decide whether the sequence can be synthesized and send you a quotation.

Silantes is applying enzymatic synthesis. Therefore not all sequences can be synthesized. E.g. the used T7-RNA polymerase requires as 5'-gg-----3' (in order to obtain a reasonable yield).

Prices for Oligo-Synthesis

Silantes calculates the costs of an oligo-synthesis for each case individually. Many parameters, such as type of isotopes required, length and amount of the oligo, the sequence and ease of purification influence the price.

The approximate price of 1mg of a customized oligonucleotide, uniform labeled with ^{13}C , ^{15}N (enrichment 97%) and chemical purity 90% is

for RNA : 2.400 €

for DNA: 2.700 €

If it is unclear whether synthesis is possible or not, Silantes will suggest to perform a feasibility study. The price of the feasibility study is 550€. This cost is reimbursed, if the synthesis service is ordered.

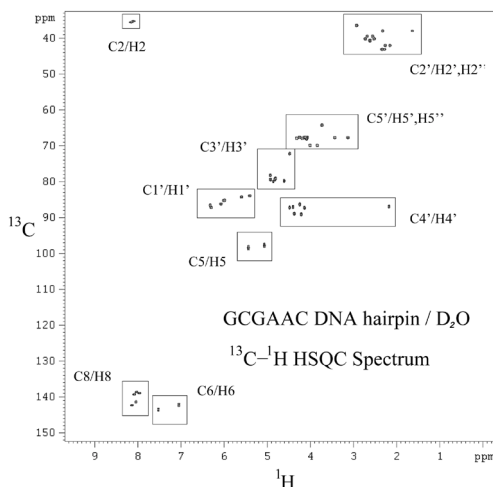


Fig. 3: 2D HSQC spectrum of d(GCGAAGC) hairpin. Conditions: 1mM GCGAAGC DNA hairpin in D₂O. 1024 x 800 points were acquired in 1 hr 20 min (4 scans per point) at 30 deg. C. ^{13}C and ^1H decoupling was applied in t₂ and t₁, respectively.

Example of a project performed by Silantes

Synthesis of an E. coli promotor sequence 23-mer: Sequence:

d(GGGACACGGCGAATAGCCATCCC)

Labeling: ^{13}C und ^{15}N (>98%) Purity:
> 90%

Amount: 1mg

Our price for the production of the above shown 23-mer oligonucleotide was 2,380 Euro.