2009

METKINEN
chemistry

Reagents and building blocks for oligonucleotide synthesis

www.metkinenchemistry.com

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chemistry

2'-Fluoro-2'-deoxynucleosides & Derivatives

Synthetic RNA oligonucleotides, incorporating 2'-Fluoro-2'-deoxynucleosides (2'-F-RNA) find constantly increasing applications in research and new drug development. Among important areas of their application are such as design and synthesis of efficient and stable siRNAs,[1] aptamers,[2] anti-microRNAs (Antagomirs)[3] as well as general use for affinity purification of RNA-binding proteins.[4]

Today Metkinen Chemistry offers more than 99% pure purine 2'-fluoronucleosides, prepared by bioconversion of synthetic 2'-F-uridine, using evolved recombinant E.coli strains. These strains, in turn are grown on the media, incorporation only ingredients, derived from yeast and vegetable. That means that in the production process no secondary reagents of animal source (either BSE certified or non- BSE certified) are employed at any stage of 2'-F- A and G preparation. Hence, we guarantee the complete absence of ANY BSE/TSE risk, associated with our 2'-F-nucleosides and derivatives.

In addition to purine 2'-F-nucleosides, we offer a full set of 2'-F-nucleoside CE-phosphoramidites for the chemical synthesis and a full set of 2'-F-nucleoside 5'-triphosphates for enzymatic preparation of 2'-F-RNA. Our latest addition to series of 2'-fluoronucleoside derivatives – 2'-F-nucleoside bound solid supports for 2'-F-RNA oligosynthesis, complements the range of these compounds and opens up a full spectrum of 2'-F-RNA applications.

References:

1. P. Muhonen, T. Tennilä, E. Azhayeva , R. Parthasarathy, A. Janckila, K. Väänänen, A. Azhayev, T. Laitala-Leinonen, Chemistry & Biodiversity, **2007**, 4, 858-873. J.M. Layzer, A.P. McCaffrey, A.K. Tanner, Z. Huang, M.A. Kay, and B.A. Sullenger, RNA, **2004**, 10, 766-771.
2. A. Rhie, L. Kirby, N. Sayer, R. Wellesley, P. Disterer, I Sylvester, A. Gill, J. Hope, W. James, A. Tahiri-Alaoui, J. Biol. Chem., **2003**, 278, 39697–39705. M. Khati, M. Schuman, J. Ibrahim, Q. Sattentau, S. Gordon, and W. James, J. Virol., **2003**, 77, 12692-12698
3. S. Davis, S. Propp, S. Freier, L. Jones, M. Serra, G.Kinberger, B. Bhat, E.Swayze, F. Bennett, C. Esau Nucleic Acids Res., **2009**, 37, 70–77.
4. R.Hovhannisyan, R. Carstens, Biotechniques, **2009**, 46, 95-98.

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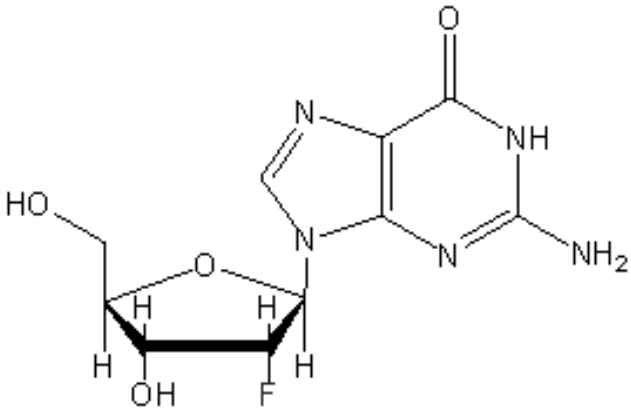
2'-Fluoro-2'-deoxynucleosides & Derivatives

2'-Fluoro-2'-Deoxyguanosine

9-(2-fluoro-2-deoxy-ß-D-ribofuranosyl)-guanine



Catalogue number: 203-15

CAS number: 125291-17-0

IUPAC name: 2'-Deoxy-2'-fluoroguanosine

Purity: > 99%

Description: white to off-white crystals

Storage of dry compound: 3 years at +4°C

Note: Gram to Kilogram scale production. Please request prices for bulk!

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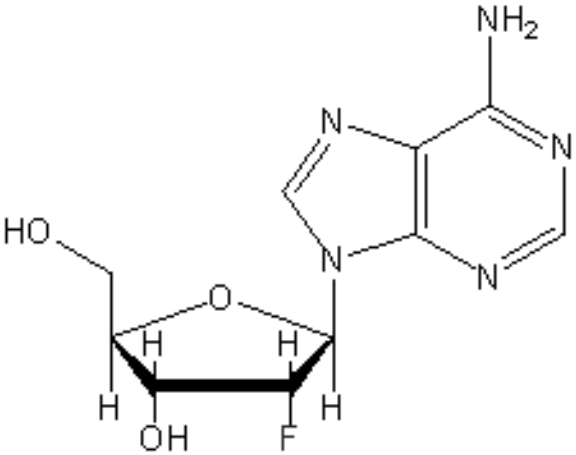
2'-Fluoro-2'-deoxynucleosides & Derivatives

2'-Fluoro-2'-Deoxyadenosine

9-(2-Deoxy-2-fluoro-ß-D-ribofuranosyl)-adenine



Catalogue number: 203-17

CAS number: 64183-27-3

IUPAC name: 2'-Deoxy-2'-fluoroadenosine

Purity: > 99%

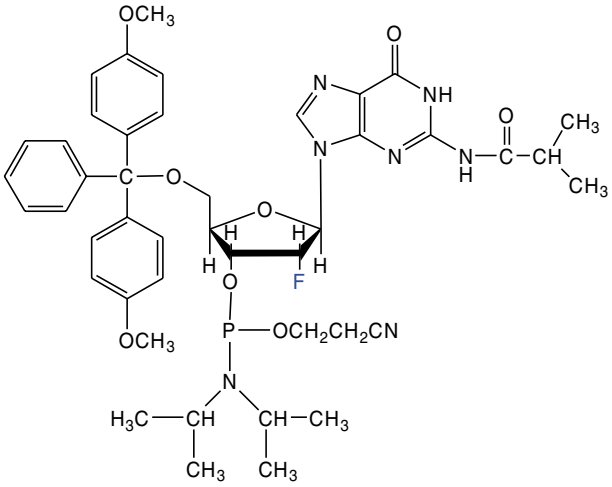
Description: white to off-white crystals

Storage of dry compound: 3 years at +4°C

Note: Gram to Kilogram scale production. Please request prices for bulk!

2'-Fluoro-2'-deoxynucleosides & Derivatives

2'-Fluoro-2'-Deoxyguanosine-3'-CE-phosphoramidite



Catalogue number: 203-50

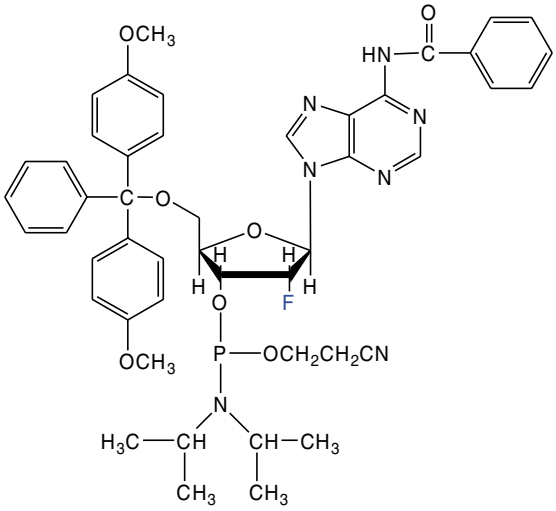
Purity: > 95%

Description: white to off-white amorphous powder

Storage of dry compound: 3 years at -20°C

2'-Fluoro-2'-deoxynucleosides & Derivatives

2'-Fluoro-2'-Deoxyadenosine-3'-CE-phosphoramidite



Catalogue number: 203-51

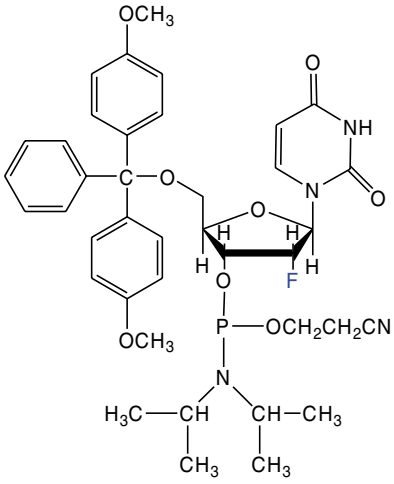
Purity: > 95%

Description: white to off-white amorphous powder

Storage of dry compound: 3 years at -20°C

2'-Fluoro-2'-deoxynucleosides & Derivatives

2'-Fluoro-2'-Deoxyuridine-3'-CE-phosphoramidite



Catalogue number: 203-52

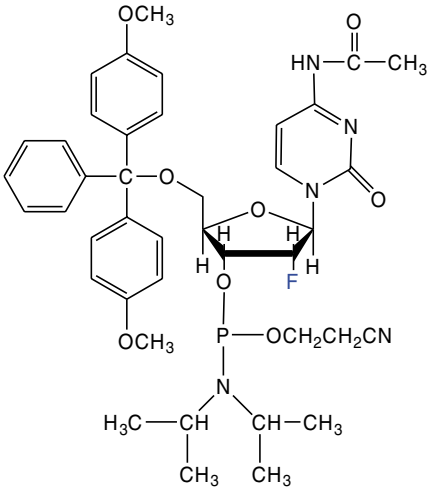
Purity: > 95%

Description: white to off-white amorphous powder

Storage of dry compound: 3 years at -20°C

2'-Fluoro-2'-deoxynucleosides & Derivatives

2'-Fluoro-2'-Deoxycytidine-3'-CE-phosphoramidite



Catalogue number: 203-53

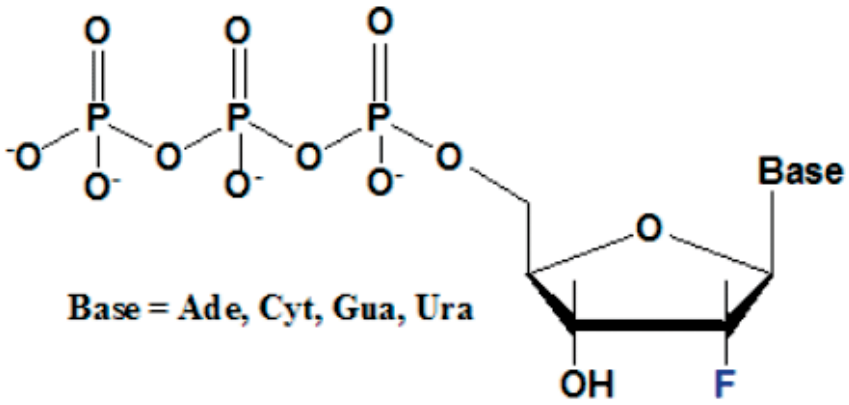
Purity: > 95%

Description: white to off-white amorphous powder

Storage of dry compound: 3 years at -20°C

2’-Fluoro-2’-deoxynucleosides & Derivatives

2’-Fluoro-2’-deoxynucleoside 5’-triphosphates



2’-Fluoro-2’-deoxynucleoside 5’-triphosphates are popular products for various applications: PCR, DNA- and RNA-polymerase, reverse transcriptase based assays, etc. Nowadays these compounds find diverse use in siRNA and Aptamer research.

Product Note: All of our Triphosphates are lithium salts. They are analyzed by NMR, UV, HPLC and are accompanied by a Product Data Sheet

2'-Fluoro-2'-deoxynucleosides & Derivatives

New 2'-F-Nucleoside bound Solid Supports (F-CS-supports)

The F-CS Solid Supports incorporate a new linker that allows 3-4 times faster cleavage of target oligonucleotide off the solid phase under the the regular cleavage/deprotection conditions. This feature make them indispensable, when UltraFAST Deprotection ULtraMILD Deprotection is necessary in order to insure the convenient isolation of modified and dye labelled oligonucleotides that appear not stable to deprotection with ammonium hydroxide or AMA at regular conditions (e.g. oligonucleotides, labled with Cy5 or Cy 5.5 dyes)

The novel F-CS supports appear absolutely similar, if not better than the conventional nucleoside bound supports (incorporating the traditional succinate linker) in terms of performance as solid phases for RNA Oligonucleotide synthesis. Noteworthy, the precise loading of the new linker on the solid phase is much easier to achieve when using the new Carbomoylation procedure, developed by Metkinen Chemistry (U.S. Patent Application Serial No 60/854,721 and International Patent Application No. PCT/FI2007/050575).

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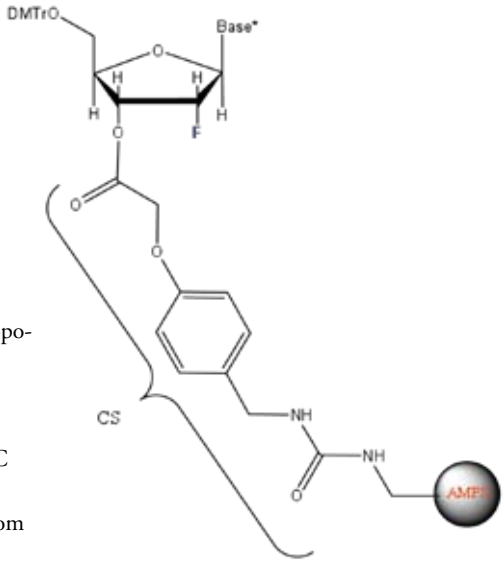
2'-Fluoro-2'-deoxynucleosides & Derivatives

New 2'-F-Nucleoside bound Solid Supports (F-CS-supports)



B*= bzAde, Thy, bzCyt, acCyt, ibuG; AMPS = macroporous aminomethyl polystyrene

F-CS-supports: 2'-F-Nucleoside Bound Solid Supports for 2'-F- RNA synthesis

Catalogue number: 103-30

Description: Chemically modified Macroporous Aminomethyl Polystyrene. White to off-white powder.

Storage of dry compound: 1 year at +4°C

Loading: standard - 30 - 40 µmol/g; custom loading – from 5 to 80 µmol/g.

Oligosynthesis on CS supports: perform oligonucleotide assembly, using standard RNA protocols, recommended by your synthesizer manufacturer.

Cleavage: Cleave the oligo from the support using concentrated aqueous ammonium hydroxide at room temperature for 30 minutes. Alternatively, cleave the oligo from the support using concentrated aqueous ammonium hydroxide – 40 % aqueous methylamine (AMA) at room temperature for 15 minutes.

Deprotection AFTER Cleavage: Following the cleavage step, proceed with oligonucleotide deprotection using the conditions appropriate for removal of the protecting groups on the nucleobases.

Reagents for RNA and DNA synthesis

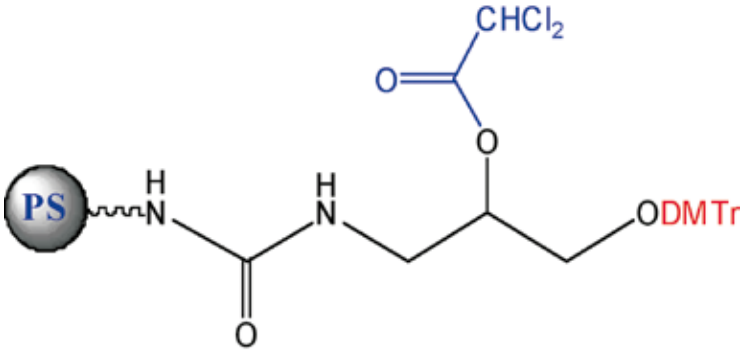
Metkinen Universal Solid Support

The universal support strategy offers the following clear advantages: eliminates the possibility of errors in parallel synthesis applications where up to 384 wells may contain different supports; eliminates the need for at least four supports for DNA synthesis and four for RNA synthesis; simplifies the preparation of oligonucleotides with modified or unusual nucleosides at the 3'-terminus.

Like our initial version of Universal Solid supports - USII, the new type of supports - Metkinen Universal Solid Support would be appropriate for the production of DNA oligos, long and short, as well as those requiring mild deprotection. It is compatible with the synthesis of RNA, (including siRNA) as well as virtually any oligonucleotide analogs (2'-F-RNA, 2'-OMe-RNA, LNA, oligonucleotide N3'•P5' phosphoramidates, etc.). The reagent used for the cleavage/dephosphorylation step is commercially available and the procedures described are fully compatible with high-throughput Synthesis.

The difference lies in the higher stability of Metkinen Universal Solid Support than that of USII upon prolong storage. In addition, the preparation of the new support appears to be more consistent and reliable.

Metkinen Universal Solid Support is subject to proprietary rights of Glen Research Corporation and is synthesized and sold under the following licensed patents: US Patent No.: 6,770,754 and European Patent No.: 1404695. The new carbomoylation chemistry, resulting in the stable urea fragment, bridging the Universal linker and aminoalkylated solid phase, is subject to proprietary rights of Metkinen Chemistry (U.S. Patent Application Serial No. 60/854,721; International Patent Application No. PCT/FI2007/050575).



METKINEN chemistry

Reagents for RNA and DNA synthesis

Universal Solid Support

Metkinen Universal Solid Support for synthesis of DNA, RNA & any type of modified oligonucleotides.

Catalogue number: 103-00

Description: Chemically modified Macropourous Aminomethyl polystyrene. White to off-white powder.

Storage of dry compound: 1 year at +20°C

Loading: 20-80 µmol/g loadings is available. Please enquire for custom loading.

Oligo synthesis on USIII: Perform oligonucleotide assembly, using standard protocols, recommended by your synthesizer manufacturer. Upon the completion of synthesis wash the oligonucleotide bound support with pure acetonitrile. Do not perform any washing steps with solvents, containing basic reagents (diethylamine, triethylamine, dimethylamine, etc.) and water!

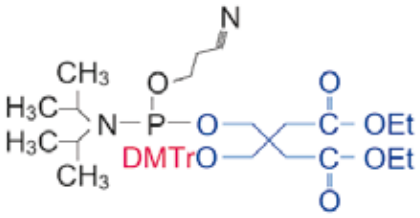
Cleavage: Cleave the oligo from the support using 3.5N - 4.5N ammonia in methanol (dilute cold 7N ammonia in methanol, Aldrich Cat. No 499145-100ML, with cold anhydrous methanol) at room temperature for 30 minutes. Do not use aqueous ammonium hydroxide and/or mixtures of ammonium hydroxide and methanol for cleavage!

Deprotection AFTER Cleavage:
Standard: After Cleavage, add 1 volume of 3.5N - 4.5N ammonia in methanol, seal and deprotect for 8-15 hours at 60 °C for removal of the protecting groups on the nucleobases.
or
Alternatively: add 1 volume of 30% ammonium hydroxide, seal and deprotect using the conditions appropriate for removal of the protecting groups on the nucleobases (e.g. at 55 °C for 5 hours).

Reagents for RNA and DNA synthesis

Chemical Phosphorylation Reagent II

Chemical Phosphorylation Reagent (CPR II) contains a DMT group which can be left on the oligonucleotide and used for rapid purification of oligonucleotide 5'-phosphates by the popular DMTr-on technique, which employs disposable RP cartridges or "Trityl-on" RP HPLC purification. The DMTr group is removed with aqueous acid (e.g., 2%TFA in the case of Cartridge Purification) and the remaining linker is then eliminated after brief treatment with aqueous ammonium hydroxide (12 -15% ammonium hydroxide at room temperature for 15 minutes) to yield the 5'-phosphate.



[3-(4,4'-Dimethoxytrityloxy)-2,2-dicarboxyethyl]propyl-(2-cyanoethyl)-(N,N-diisopropyl)-phosphoramidite

Catalogue number: 103-10

Description: amorphous colorless glass

Storage of dry compound: 1 year at -20°C

Coupling Conditions: 6 minute coupling time.

Omit the capping step after the addition of this reagent!

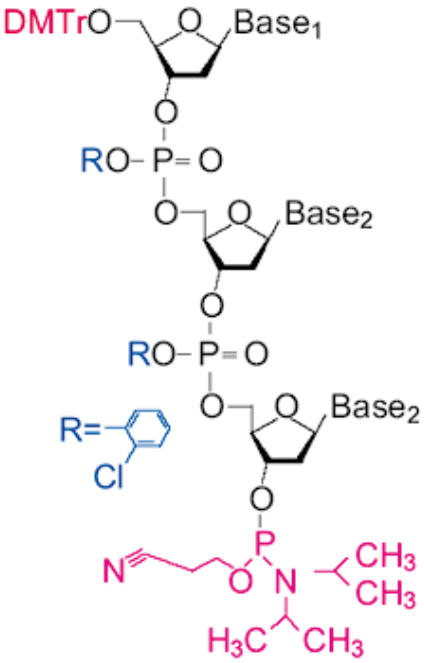
Reagents for RNA and DNA synthesis

Trinucleotide (TRIMER CODON) Phosphoramidites

Catalogue number: 103-20

Description: white to off-white powder

Storage of dry compound: 1 year at -20°C



Protein mutagenesis can be used to fine tune a variety of properties, such as improved stability to high temperatures, denaturants, or non-aqueous solvents; higher affinity binding to a target molecule; increased rates of enzymatic reactions; or changes of specificities. However, generating and finding these improved proteins can be a difficult task. One of the most popular methods is to make pools of degenerate oligonucleotides, which can be incorporated into the genes as cassettes or by PCR by using the degenerate oligo as a primer.[1] Degenerate oligonucleotides are synthesized as a mixture of A/C/G/T phosphoramidites (N) at the site of the codons to be mutated. Problems arise, though, from using an equimolar solution of each base. First there is a coding bias. Out of the 64 possible codon combinations of A, C, G and T, 18 code for leucine, arginine or serine, but only 2 for tryptophan or methionine. As a result, only 3% of the mutagenic oligonucleotides will contain methionine or tryptophan, and over 28% will contain either leucine, arginine or serine. In addition, the three nonsense codons will lead to chain termination in 4.7% of the sequences. There are ways to improve this situation. For instance, using two degenerate mixes of bases, N and G/C, on the DNA synthesizer to insert NNG/C into the sequence will halve the number of the most degenerate codons, but still code for all 20 amino acids. However, still 59% of the clones will code for just eight amino acids and 3% will have a stop codon inserted.

Reagents for RNA and DNA synthesis

Trinucleotide (TRIMER CODON) Phosphoramidites

The generation of redundant sequences and stop codons makes searching a clonal library inefficient. However, it is possible to improve the efficiency of this process by using a mixture of trinucleotide (trimer) phosphoramidites.[2–5] By synthesizing a set of trimers that cover all 20 amino acids, the mutation of a gene can be carried out at the codon level rather than at individual bases. Therefore, unlike other methods of mutagenesis, trimer phosphoramidites lead to no codon bias, no frame-shift mutations, and no production of stop codons, making them one of the most efficient tools to explore sequence space in protein regions that are important for function [6] – even in nonsaturating conditions.[7, 8]

References:

1. Zon, G., Gallo, K., Samson, C., Shao, K., Michael F. Summers, M., Byrd, R. Nucleic Acids Res, **1985,** 13, 8181-8196.
2. Kayushin, A., Korosteleva, M., Miroshnikov. Nucleos. Nucleot. Nucleic Acids, **2000,** 19, 1967-1976.
3. Kayushin, A., M. Korosteleva, . Miroshnikov, A. Nucleos Nucleot, **1999,** 18, 1531-1533.
4. Kayushin, A., M. Korosteleva, . Miroshnikov, A. W. Kosch, W., Zubov, D., Piel N. Nucleic Acids Res., **1996,** 24, 3748-3755.
5. Mauriala, T., Auriola, S., Azhayev, A., Kayushin, A., Korosteleva, M., Miroshnikov, A. J Pharm Biomed Anal, **2004.** 34, 199-206.
6. Yagodkin, A., Azhayev, A., Roivainen, J., Antopolsky, M., Kayushin, A., Korosteleva, M., Miroshnikov, A., Randolph, J., Mackie, H. Nucleos. Nucleot. Nucleic Acids **2007,** 26, 473-497.
7. Neylon, C. Nucleic Acids Res, **2004.** 32, 1448-59.
8. Sondek, J. and D. Shortle, Proc Natl. Acad. Sci. U S A, **1992.** 89,3581-3585.

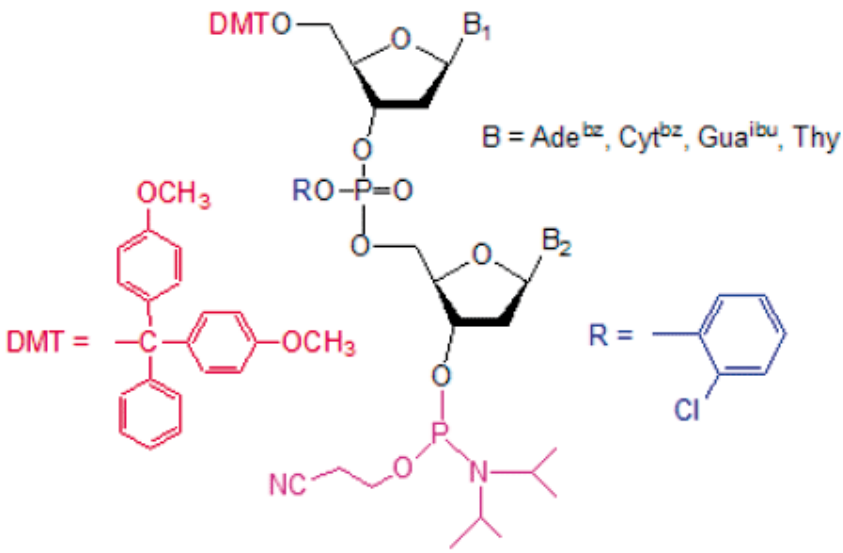
Reagents for RNA and DNA synthesis

Dimer Phosphoramidites

Catalogue number: 103-21

As an alternative to Trimer Phosphoramidites we offer less expensive Dimer Phosphoramidites for generation of randomised oligonucleotide libraries.[1] All 16 dimeric building blocks are available separately or as a custom mixture.

1. P.Neuner, R. Cortese, P. Monaci, Nucleic Acids Research **1998**, 26, 1223-1227.



Reagents for RNA and DNA synthesis

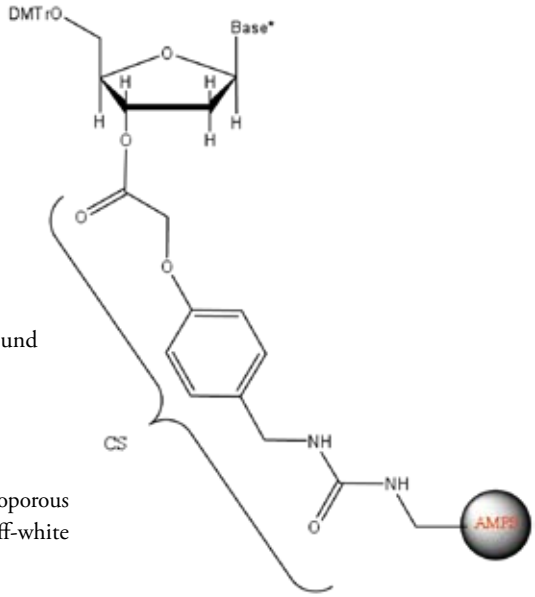
New 2'-Deoxynucleoside bound Solid Supports (CS-supports)

The CS Solid Supports incorporate a new linker that allows 3–4 times faster cleavage of target oligonucleotide off the solid phase under the the regular cleavage/deprotection conditions. This feature make them indispensable, when Ultra-FAST Deprotection ULtraMILD Deprotection is necessary in order to insure the convenient isolation of modified and dye labelled oligonucleotides that appear not stable to deprotection with ammonium hydroxide or AMA at regular conditions (e.g. oligonucleotides, labled with Cy5 or Cy 5.5 dyes)

The novel CS supports appear absolutely similar, if not better than the conventional nucleoside bound supports (incorporating the traditional succinate linker) in terms of performance as solid phases for Oligonucleotide synthesis. Noteworthy, the precise loading of the new linker on the solid phase is much easier to achieve when using the new Carbomoylation procedure, developed by Metkinen Chemistry (U.S. Patent Application Serial No 60/854,721 and International Patent Application No. PCT/FI2007/050575).

Reagents for RNA and DNA synthesis

New 2'-Deoxynucleoside bound Solid Supports (CS-supports)



B*= bzAde, Thy, bzCyt, acCyt, ibGua; AMPS = macroporous aminomethyl polystyrene

CS –Supports: 2'-Deoxynucleoside Bound Solid Supports for DNA synthesis

Catalogue number: 103-31

Description: Chemically modified Macroporous Aminomethyl Polystyrene. White to off-white powder.

Storage of dry compound: 1 year at +4°C

Loading: standard - 30 - 40 µmol/g; custom loading – from 5 to 80 µmol/g.

Oligosynthesis on CS supports: perform oligonucleotide assembly, using standard DNA protocols, recommended by your synthesizer manufacturer.

Cleavage: Cleave the oligo from the support using concentrated aqueous ammonium hydroxide at room temperature for 30 minutes. Alternatively, cleave the oligo from the support using concentrated aqueous ammonium hydroxide – 40 % aqueous methylamine (AMA) at room temperature for 15 minutes.

Deprotection AFTER Cleavage: Following the cleavage step, proceed with oligonucleotide deprotection using the conditions appropriate for removal of the protecting groups on the nucleobases.

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2'-Fluoro-2'-deoxyarabinonucleosides (FANA) & Derivatives

2'-Fluoroaraninooligonucleotides (FANA) can be used as antisense oligonucleotides,[1] siRNA[2] and aptamers.[3] Today Metkinen Chemistry offers synthetically synthesized pyrimidine 2'-fluoro-arabinonucleosides as well as purine 2'-fluoro-arabinonucleosides, prepared by bioconversion of synthetic 2'-F-arabinothymidine, employing evolved recombinant E.coli strains. We guarantee the complete absence of ANY BSE/TSE risk, associated with our 2'-F-fluoroarabinonucleosides.

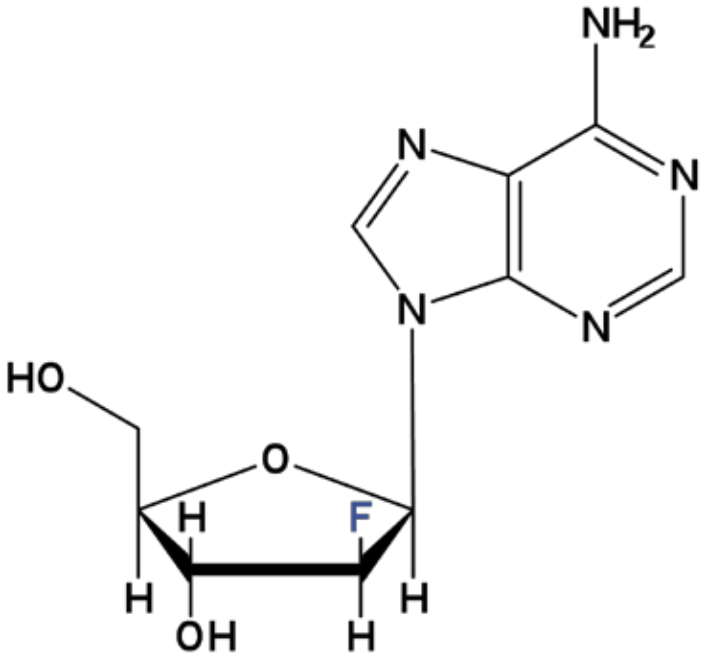
Starting from October 2009 Metkinen Chemistry will launch production of a full set of 2'-F-arabinonucleoside CE-phosphoramidites for the chemical synthesis and a full set of 2'-F-arabinonucleoside 5'-triphosphates for enzymatic preparation of 2'-FANA.

References:

1. A. Kalota L. Karabon, C. R. Swider, E. Viazovkina, M. Elzagheid, M. J. Damha,A. M. Gewirtz, Nucleic Acids Res.(**2006**) 34, 451-461.
2. T. Dowler, D. Bergeron, A-L. Tedeschi, L. Paquet, N.Ferrari, M. Damha, Nucleic Acids Res.(**2006**) 34, 1669-1675.
3. M. Damha, C. Peng, International Patent Application PCT/CA2006/001635

2’-Fluoro-2’-deoxyarabinonucleosides (FANA) & Derivatives

9-(2-fluoro-2-deoxy-ß-D-arabinofuranosyl)adenine (2’-FANA-A)



Catalogue number: 105-01

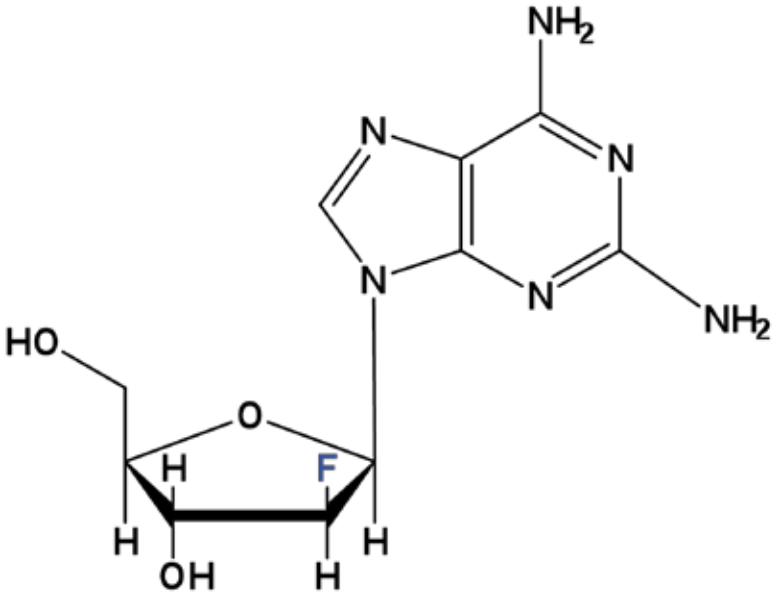
Purity: > 98%

Description: white to off-white crystals

Storage of dry compound: 3 years at +4°C

2'-Fluoro-2'-deoxyarabinonucleosides (FANA) & Derivatives

9-(2-fluoro-2-deoxy-ß-D-arabinofuranosyl)-2,6-diaminopurineriboside (2'-FANA-DAP)



Catalogue number: 105-02

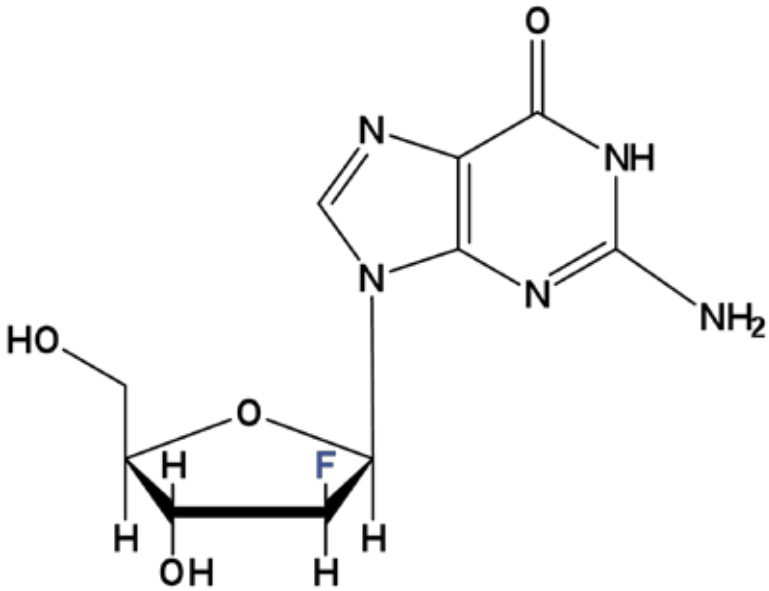
Purity: > 98%

Description: white to off-white crystals

Storage of dry compound: 3 years at +4°C

2’-Fluoro-2’-deoxyarabinonucleosides (FANA) & Derivatives

9-(2-fluoro-2-deoxy-ß-D-arabinofuranosyl)guanine (2’-FANA-G)



Catalogue number: 105-03

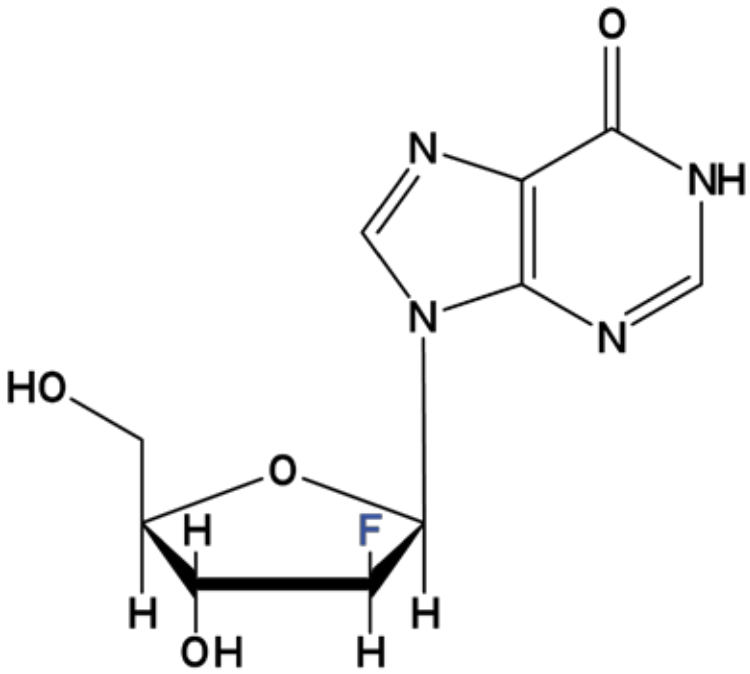
Purity: > 98%

Description: white to off-white crystals

Storage of dry compound: 3 years at +4°C

2'-Fluoro-2'-deoxyarabinonucleosides (FANA) & Derivatives

9-(2-fluoro-2-deoxy-ß-D-arabinofuranosyl)hypoxantine (2'-FANA-I)



Catalogue number: 105-04

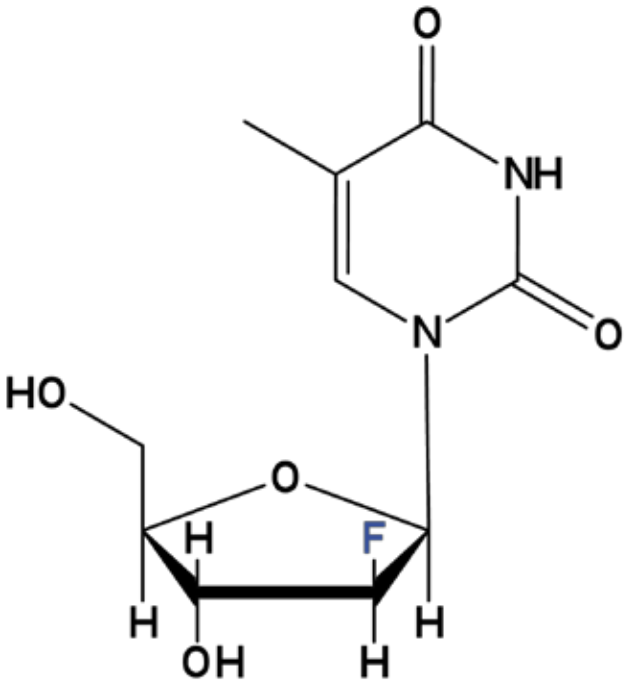
Purity: > 98%

Description: white to off-white crystals

Storage of dry compound: 3 years at +4°C

2'-Fluoro-2'-deoxyarabinonucleosides (FANA) & Derivatives

1-(2-fluoro-2-deoxy-ß-D-arabinofuranosyl)thymine (2'-FANA-T)



Catalogue number: 105-05

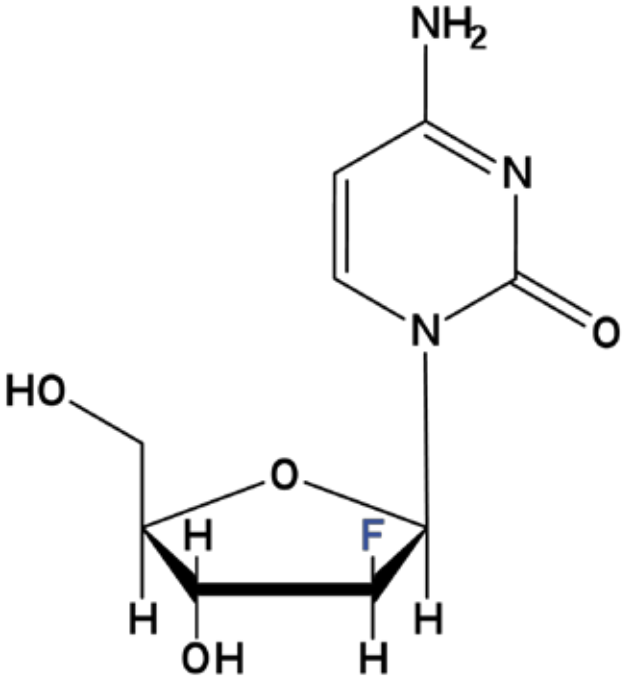
Purity: > 98%

Description: white to off-white crystals

Storage of dry compound: 3 years at +4°C

2'-Fluoro-2'-deoxyarabinonucleosides (FANA) & Derivatives

1-(2-fluoro-2-deoxy-ß-D-arabinofuranosyl)cytosine (2'-FANA-C)



Catalogue number: 105-06

Purity: > 98%

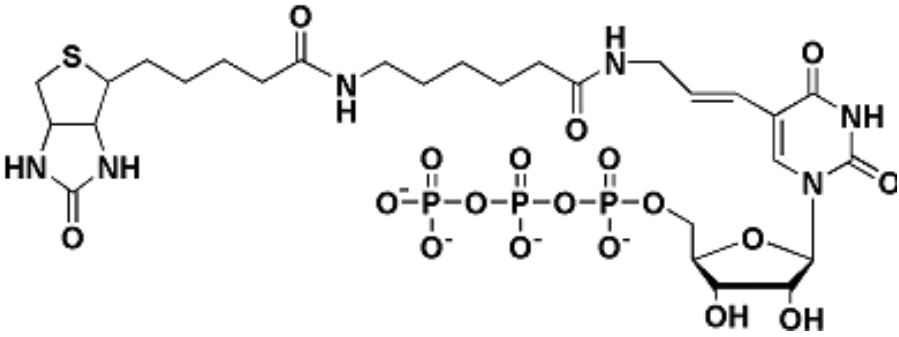
Description: white to off-white crystals

Storage of dry compound: 3 years at +4°C

Biotin Labeled Triphosphates

Biotin-11-UTP

5-[3-(6-(Biotinylamido)hexanoylamido)propenyl]-uridine-5'-triphosphate, triethylammonium or tetralithium (optional) salt



Catalogue number: 303-31

Diluent: dd-H_2O

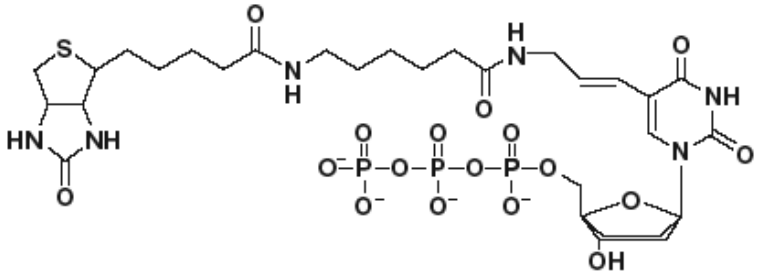
Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: 1 month as 1 mM solution in water or neutral buffers at +4°C, 6 months as 1 mM solution in water or neutral buffers at -20°C.

Biotin Labeled Triphosphates

Biotin-11-dUTP

5-[3-(6-(Biotinylamido)hexanoylamido)propenyl]-2'-deoxyuridine-5'-triphosphate, triethylammonium or tetralithium (optional) salt



Catalogue number: 303-11

Diluent: dd-H_2O

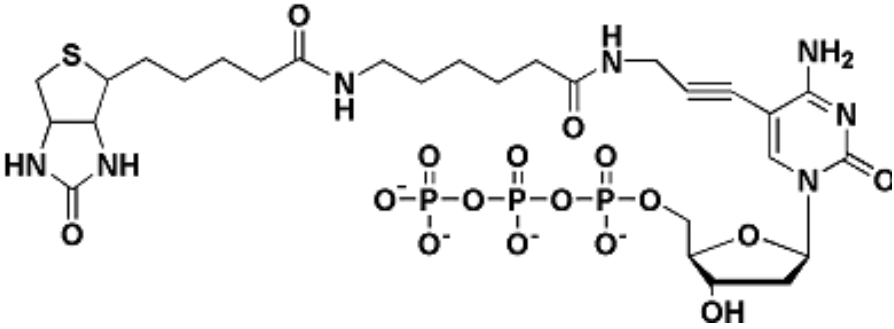
Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: 1 month as 1 mM solution in water or neutral buffers at +4°C, 6 months as 1 mM solution in water or neutral buffers at -20°C.

Biotin Labeled Triphosphates

Biotin-11-dCTP

5-[3-(6-(Biotinylamido)hexanoylamido)propenyl]-2'-deoxycytidine-5'-triphosphate, triethylammonium or tetralithium (optional) salt



Catalogue number: 303-21

Diluent: dd-H_2O

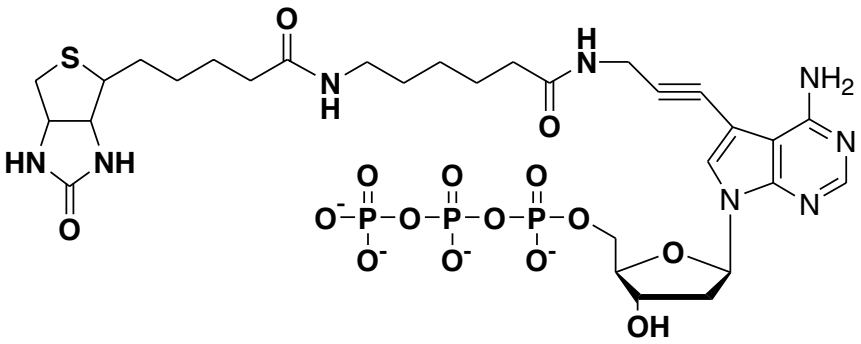
Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: 1 month as 1 mM solution in water or neutral buffers at +4°C, 6 months as 1 mM solution in water or neutral buffers at -20°C.

Biotin Labeled Triphosphates

Biotin-11-dATP

5-[3-{3-(6-(Biotinylamido)hexanoylamido)bytyrylamido}propenyl]-2'-deoxy-7-deazaadenosine-5'-triphosphate, triethylammonium or tetralithium (optional) salt



Catalogue number: 303-71

Diluent: dd-H_2O

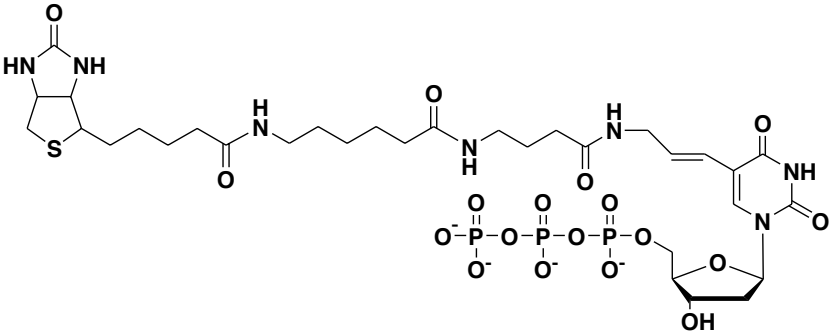
Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: 1 month as 1 mM solution in water or neutral buffers at +4°C, 6 months as 1 mM solution in water or neutral buffers at -20°C.

Biotin Labeled Triphosphates

Biotin-16-dUTP

5-[3-{3-(6-(Biotinylamido)hexanoylamido)bytyrylamido}propenyl]-2'-deoxyuridine-5'-triphosphate, triethylammonium or tetralithium (optional) salt



Catalogue number: 303-14

Diluent: dd-H_2O

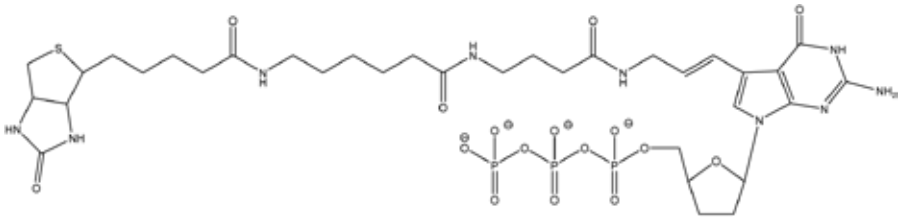
Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: 1 month as 1 mM solution in water or neutral buffers at +4°C, 6 months as 1 mM solution in water or neutral buffers at -20°C.

Biotin Labeled Triphosphates

Biotin-11-dGTP

7-[3-(6-(Biotinylamido)hexanoylamido)propynyl]-2'-deoxy-7-deazaguanosine-5'-triphosphate, triethylammonium salt



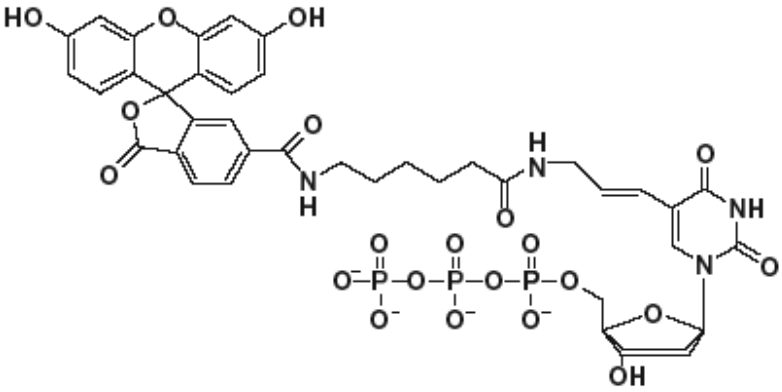
Catalogue number: 303-72

Storage of dry compound: Freezer storage, -10 to -30 °C

Fluorscein Labeled Triphosphates

6-FAM-11-dUTP

5-[3-(6-(fluoresceinyl-6-carboxamido)hexanoylamido)-propenyl]-2'-deoxyuridine-5'-triphosphate, triethylammonium or tetralithium (optional) salt



Catalogue number: 303-12

Diluent: dd-H_2O

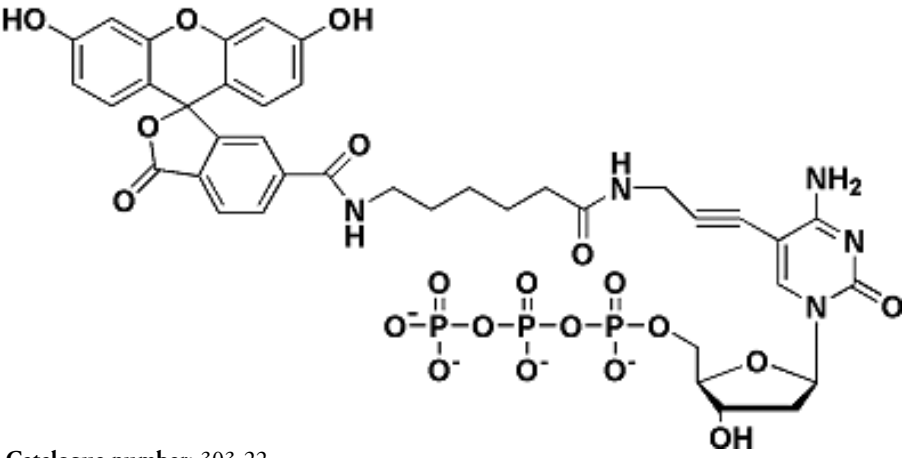
Storage: Freezer storage in dark, -10 to -30°C, dry.

Stability in Solution: 1 month as 1 mM solution in water or neutral buffers at +4°C, 6 months as 1 mM solution in water or neutral buffers at -20°C in dark.

Fluorscein Labeled Triphosphates

6-FAM-11-dCTP

5-[3-(6-(fluoresceinyl-6-carboxamido)hexanoylamido)-propenyl]-2'-deoxycytidine-5'-triphosphate, triethylammonium or tetralithium (optional) salt



Catalogue number: 303-22

Diluent: dd-H_2O

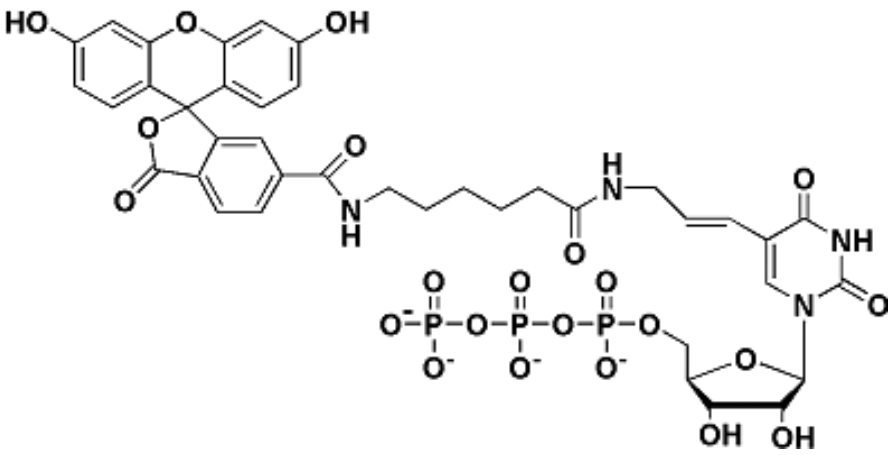
Storage: Freezer storage in dark, -10 to -30°C, dry.

Stability in Solution: 1 month as 1 mM solution in water or neutral buffers at +4°C in dark, 6 months as 1 mM solution in water or neutral buffers at -20°C in dark.

Fluorscein Labeled Triphosphates

6-FAM-11-UTP

5-[3-(6-(fluoresceinyl-6-carboxamido)hexanoylamido)-propenyl]- uridine-5'-triphosphate, triethylammonium or tetralithium (optional) salt



Catalogue number: 303-32

Diluent: dd-H_2O

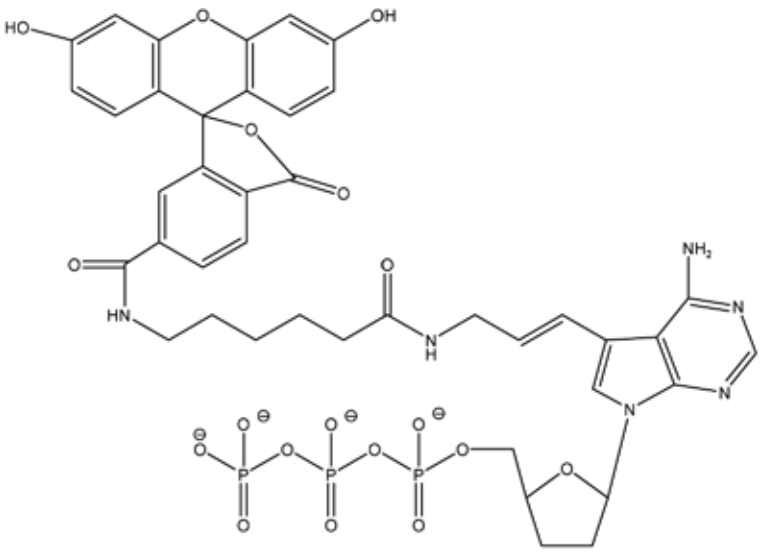
Storage: Freezer storage in dark, -10 to -30°C, dry.

Stability in Solution: 1 month as 1 mM solution in water or neutral buffers at +4°C in dark, 6 months as 1 mM solution in water or neutral buffers at -20°C in dark.

Fluorscein Labeled Triphosphates

FAM-11-dATP

7-[3-(6-(6-Fluorosceinamido)hexanoylamido)propynyl]-2'-deoxy-7-deazaguanosine-5'-triphosphate, triethylammonium salt



Catalogue number: 303-80

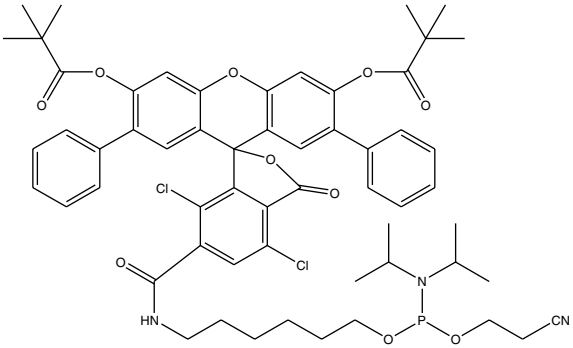
Storage of dry compound: Freezer storage, -10 to -30 °C

SIMA Phosphoramidites and CPG

SIMA phosphoramidite

[(3',6'-dipivaloyl-2',7'-diphenyl-4,7-dichlorofluoresceinyl)-6-carboxamidohexyl]-1-O-(2-cyanoethyl)-(N,N-diisopropyl)-phosphoramidite

Catalog number: 303-55



SIMA is a full spectral analog of HEX in all fluorescent applications, but has significantly improved stability. It has a higher quantum yield and molecular extinction than HEX. SIMA is also more versatile in oligo synthesis especially due to improved stability during deprotection and simple purification of labeled oligos

Formula: $C_{58}H_{64}Cl_2N_3O_{10}P$
M.W.: 1065.0

Diluent: Anhydrous Acetonitrile

Coupling: No changes needed from standard method recommended by synthesizer manufacturer.

Deprotection: No changes needed from standard method recommended by synthesizer manufacturer. SIMA labeled oligos are stable at 55°C in ammonium hydroxide (up to 6-8 hours) and can be deprotected with AMA.

Storage: Freezer storage, -10 to -30°C, dry.

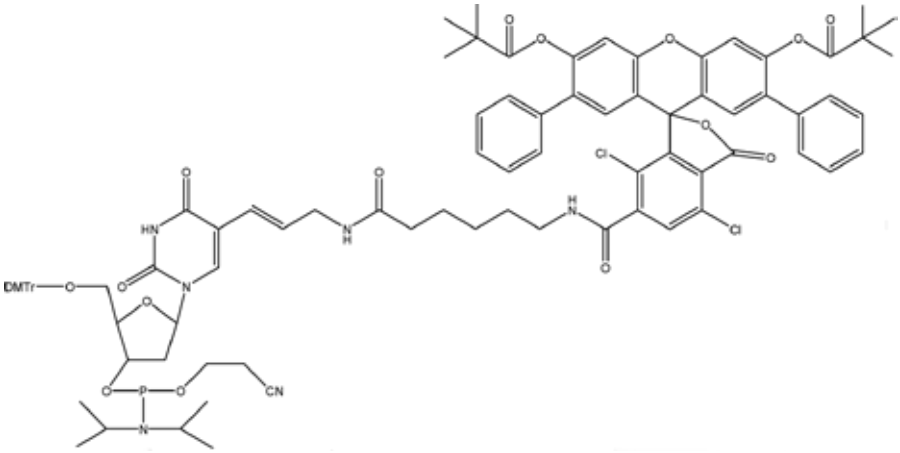
Stability in Solution: 2-3 days, <90% efficient after 4 days

Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C.
Do not store crude fluorescently labeled oligonucleotides in ammonia.

SIMA Phosphoramidites and CPG

6-SIMA-dT

Mol.Wt: 1577,75



Catalogue Number: 303-56

Diluent: Anhydrous Acetonitrile

Coupling: 6 minute coupling time recommended

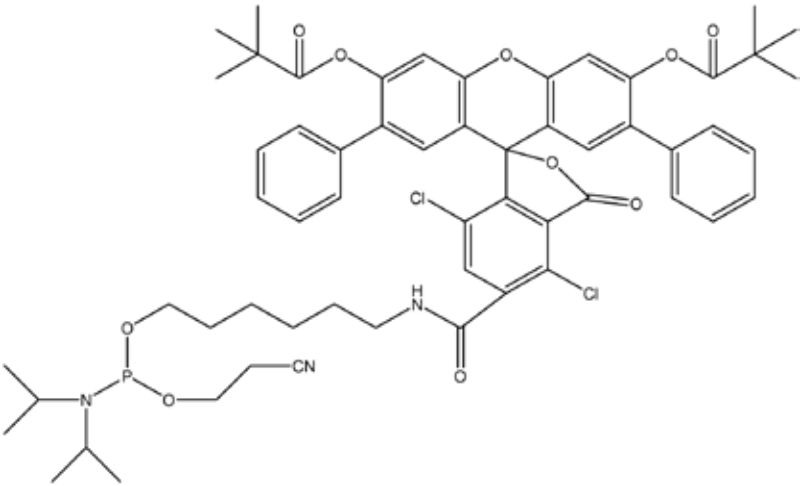
Deprotection: No changes needed from standard method recommended by synthesizer manufacturer. (55 C in ammonium hydroxide up to 6-8 hours) and can be deprotected with AMA

Storage: Freezer storage, -10 to -30°C, dry. 1 year of storage guarantied

SIMA Phosphoramidites and CPG

5-SIMA phosphoramidite

Formula:: C58H64Cl2N3O10P
M.W.: 1065.0



Catalogue Number: 303-57

Diluent: Anhydrous Acetonitrile

Coupling: No changes needed from standard method recommended by synthesizer manufacturer.

Deprotection: No changes needed from standard method recommended by synthesizer manufacturer. SIMA labeled oligos are stable at 55°C in ammonium hydroxide (up to 6-8 hours) and can be deprotected with AMA.

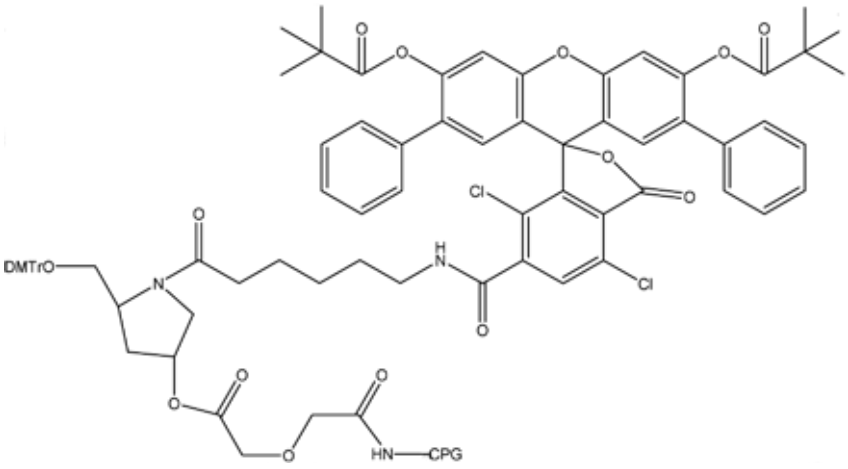
Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: 2-3 days, <90% efficient after 4 days

SIMA Phosphoramidites and CPG

6-SIMA-CPG

Mol.Wt: 1577,75



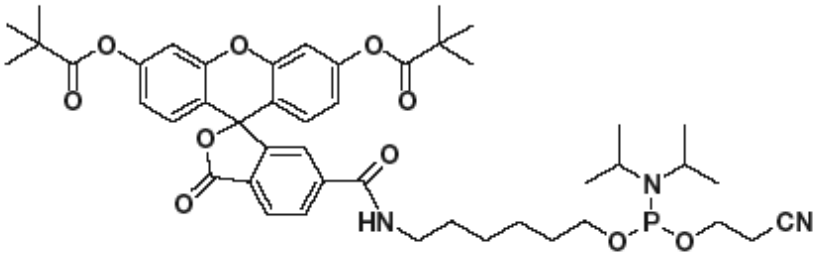
Catalogue Number: 303-58

Deprotection: No changes needed from standard method recommended by synthesizer manufacturer. (55 C in ammonium hydroxide up to 6-8 hours)) and can be deprotected with AMA

FAM Phosphoramidites and CPG

5'-Fluorescein phosphoramidite (6-FAM)

[(3',6'-dipivaloylfluoresceinyl)-6-carboxamidohexyl]-1-O-(2-cyanoethyl)-(N,N-diisopropyl)-phosphoramidite



Catalogue number: 303-41

Diluent: Anhydrous Acetonitrile

Coupling: 3 minute coupling time recommended

Deprotection: No changes needed from standard method recommended by synthesizer manufacturer.

Storage: Freezer storage, -10 to -30°C, dry.

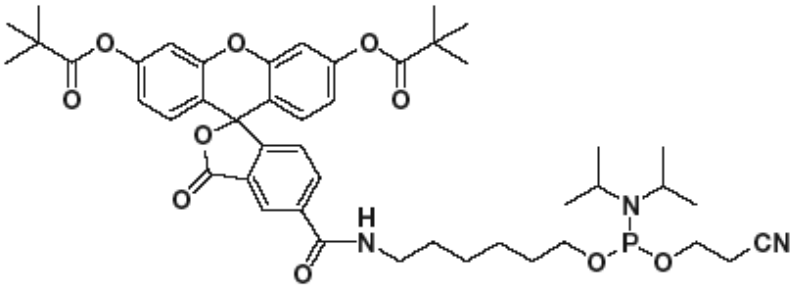
Stability in Solution: 2-3 days, <90% efficient after 4 days

Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C.
Do not store crude fluorescently labeled oligonucleotides in ammonia.

FAM Phosphoramidites and CPG

5'-Fluorescein phosphoramidite (5-FAM)

[(3',6'-dipivaloylfluoresceinyl)-5-carboxamidohexyl]-1-O-(2-cyanoethyl)-(N,N-diisopropyl)-phosphoramidite



Catalogue number: 303-42

Diluent: Anhydrous Acetonitrile

Coupling: 3 minute coupling time recommended

Deprotection: No changes needed from standard method recommended by synthesizer manufacturer.

Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: 2-3 days, <90% efficient after 4 days

Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C.
Do not store crude fluorescently labeled oligonucleotides in ammonia.

FAM Phosphoramidites and CPG

Fluorescein phosphoramidite (I)

(2S,4R)-N-(6-(3',6'-dipivaloylfluoresceinyl-5-carboxamido)hexanoylamido)-4-O-[(2-cyanoethyl)-(N,N-diisopropyl)-phosphoramidite]-2-(dimethoxytrityloxymethyl)pyrrolidine

Catalogue number: 303-43

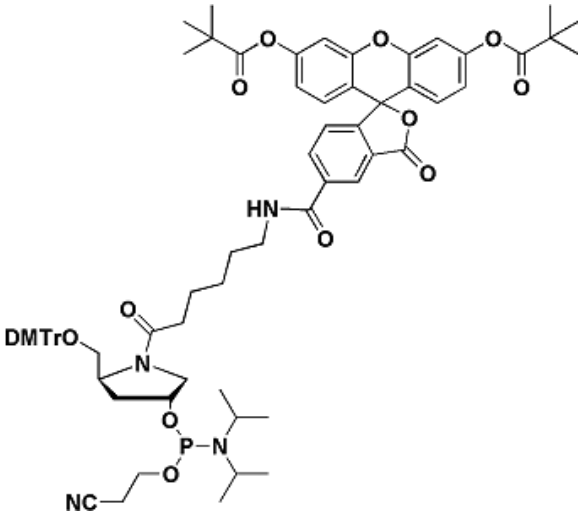
Diluent: Anhydrous Acetonitrile

Coupling: 10 minute coupling time recommended

Deprotection: No changes needed from standard method recommended by synthesizer manufacturer.

Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: 7-10 days, <90% efficient after 14 days



Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C. Do not store crude fluorescently labeled oligonucleotides in ammonia.

FAM Phosphoramidites and CPG

Fluorescein phosphoramidite (II)

(2S,4R)-N-(6-(3',6'-dipivaloylfluoresceinyl-6-carboxamido)hexanoylamido)-4-O-[(2-cyanoethyl)-(N,N-diisopropyl)-phosphoramidite]-2-(dimethoxytrityloxymethyl)pyrrolidine

Catalogue number: 303-44

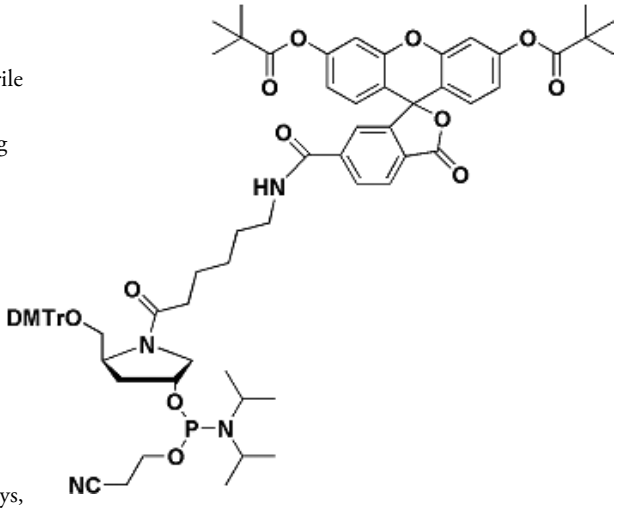
Diluent: Anhydrous Acetonitrile

Coupling: 10 minute coupling time recommended

Deprotection: No changes needed from standard method recommended by synthesizer manufacturer.

Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: 7-10 days, <90% efficient after 14 days

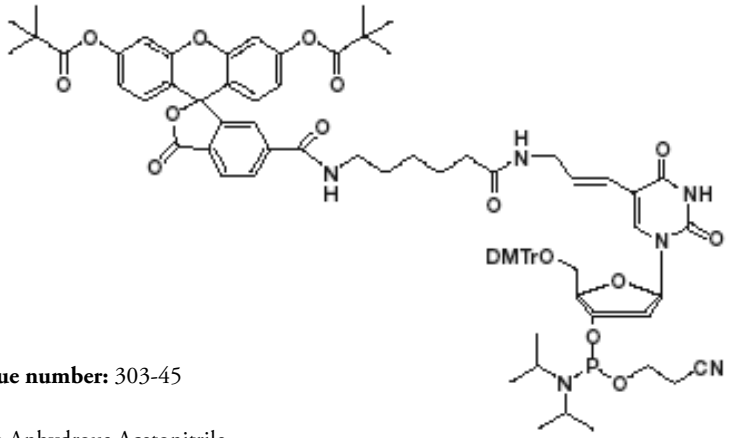


Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C. Do not store crude fluorescently labeled oligonucleotides in ammonia.

FAM Phosphoramidites and CPG

6-Fluorescein dT phosphoramidite

5'-Dimethoxytrityl-5-[3-(6-(fluoresceinyl-6-carboxamido)hexanoylamido)-propenyl] uridine, 3'- (2-cyanoethyl)-(N,N-diisopropyl)-phosphoramidite



Catalogue number: 303-45

Diluent: Anhydrous Acetonitrile

Coupling: 10 minute coupling time recommended

Deprotection: No changes needed from standard method recommended by synthesizer manufacturer.

Storage: Freezer storage, -10 to -30°C, dry.

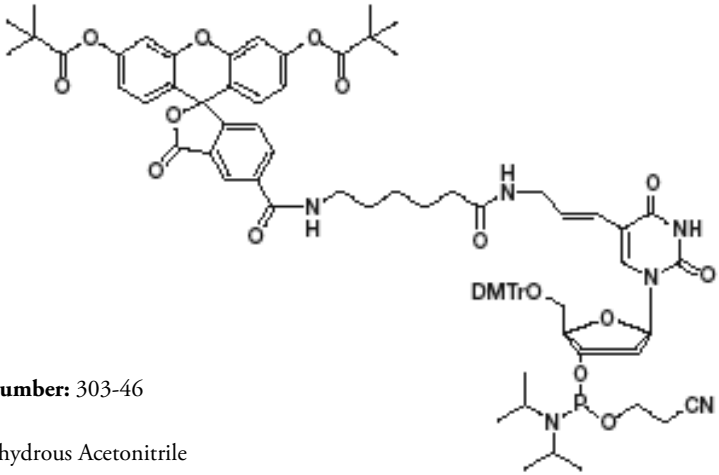
Stability in Solution: 7-10 days, <90% efficient after 14 days

Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C. Do not store crude fluorescently labeled oligonucleotides in ammonia.

FAM Phosphoramidites and CPG

5-Fluorescein dT phosphoramidite

5'-Dimethoxytrityl-5-[3-(6-(fluoresceinyl-5-carboxamido)hexanoylamido)-propenyl] uridine-3'-(2-cyanoethyl)-(N,N-diisopropyl)-phosphoramidite



Catalogue number: 303-46

Diluent: Anhydrous Acetonitrile

Coupling: 10 minute coupling time recommended

Deprotection: No changes needed from standard method recommended by synthesizer manufacturer.

Storage: Freezer storage, -10 to -30°C, dry.

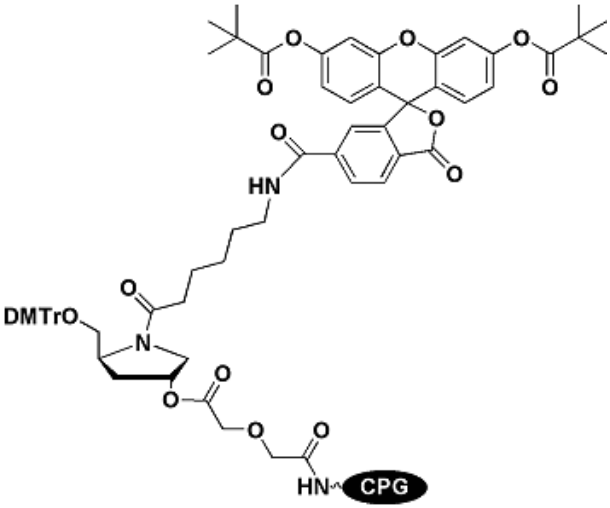
Stability in Solution: 7-10 days, <90% efficient after 14 days

Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C.
Do not store crude fluorescently labeled oligonucleotides in ammonia.

FAM Phosphoramidites and CPG

3'-(6-Fluorescein)-CPG

(2S,4R)-N-(6-(3',6'-dipivaloylfluoresceinyl-6-carboxamido)hexanoylamido)-4-O-(diglycoyl-long chain alkylamino-CPG)-2-(dimethoxytrityloxymethyl)pyrrolidine



Catalogue number: 303-47

Diluent: Not Applicable

Coupling: This support should be used in a manner identical to normal protected nucleoside support since it contains the DMT group.

Deprotection: No changes needed from standard method recommended by synthesizer manufacturer.

Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: Not Applicable

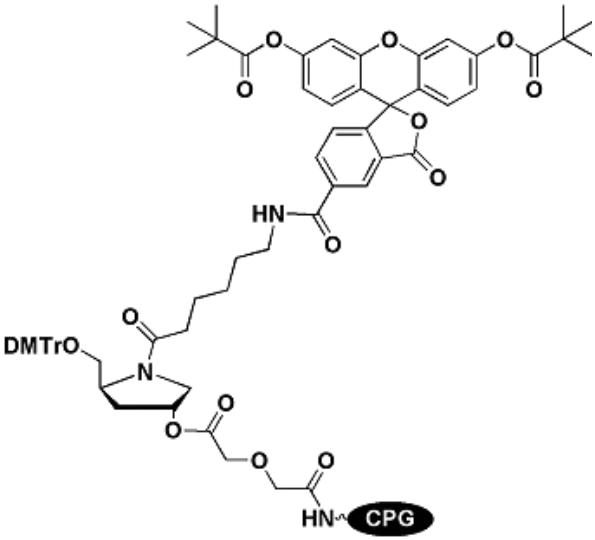
Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C. Do not store crude fluorescently labeled oligonucleotides in ammonia.

FAM Phosphoramidites and CPG

3'-(5-Fluorescein)-CPG

(2S,4R)-N-(6-(3',6'-dipivaloylfluoresceinyl-5-carboxamido)hexanoylamido)-4-O-(diglycoyl-long chain alkylamino-CPG)-2-(dimethoxytrityloxymethyl)pyrrolidine

1-Dimethoxytrityloxy-3-aza-3-[1-oxo-3-{(di-O-pivaloyl-fluorescein)-5-carboxamido}propyl]heptyl-6-Odiglycoyl- long chain alkylamino-CPG



Catalogue number: 303-48

Diluent: Not Applicable

Coupling: This support should be used in a manner identical to normal protected nucleoside support since it contains the DMT group.

Deprotection: No changes needed from standard method recommended by synthesizer manufacturer.

Storage: Freezer storage, -10 to -30°C, dry.

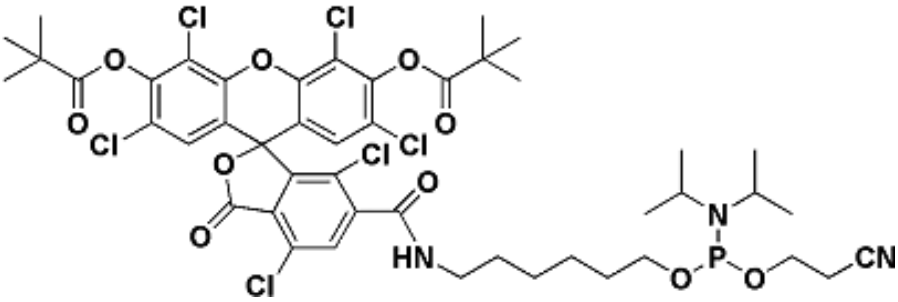
Stability in Solution: Not Applicable

Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C. Do not store crude fluorescently labeled oligonucleotides in ammonia.

HEX Phosphoramidites

HEX phosphoramidite

[(4,7,2',4',5',7'-hexachloro-3',6'-dipivaloylfluoresceinyl)-6-carboxamidohexyl]-1-O-(2-cyanoethyl)-(N,N-diisopropyl)-phosphoramidite



Catalogue number: 303-51

Diluent: Anhydrous Acetonitrile

Coupling: 3 minute coupling time recommended

Deprotection: Ammonium Hydroxide for 24 hrs at room temperature.

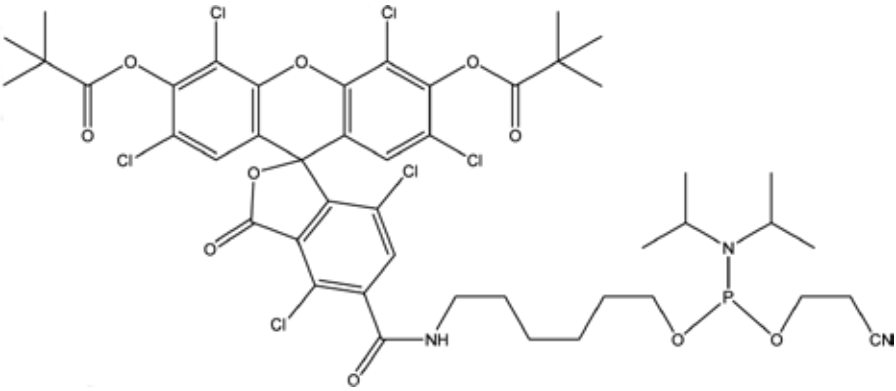
Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: 2-3 days, <90% efficient after 4 days

Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C.
Do not store crude fluorescently labeled oligonucleotides in ammonia.

HEX Phosphoramidites

5-HEX phosphoramidite



Catalogue number: 303-59

Diluent: Anhydrous Acetonitrile

Coupling: 3 minute coupling time recommended

Deprotection: Ammonium Hydroxide for 24 hrs at room temperature.

Storage: Freezer storage, -10 to -30°C, dry.

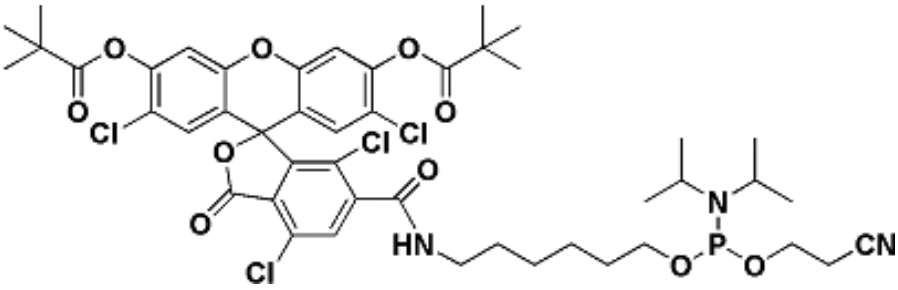
Stability in Solution: 2-3 days, <90% efficient after 4 days

Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C.
Do not store crude fluorescently labeled oligonucleotides in ammonia.

TET Phosphoramidites

TET phosphoramidite

[(4,7,2',7'-tetrachloro-3',6'-dipivaloylfluoresceinyl)-6-carboxamidohexyl]-1-O-(2-cyanoethyl)-(N,N-diisopropyl)-phosphoramidite



Catalogue number: 303-61

Diluent: Anhydrous Acetonitrile

Coupling: 3 minute coupling time recommended

Deprotection: Ammonium Hydroxide for 24 hrs at room temperature.

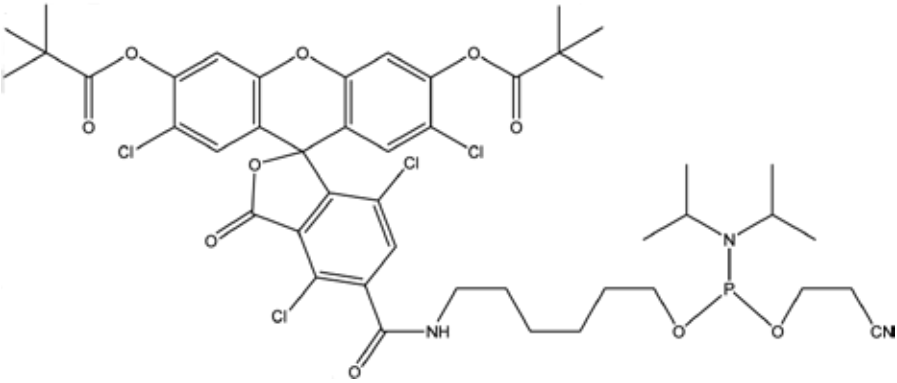
Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: 2-3 days, <90% efficient after 4 days

Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C.
Do not store crude fluorescently labeled oligonucleotides in ammonia.

TET Phosphoramidites

5-TET phosphoramidite



Catalogue number: 303-65

Diluent: Anhydrous Acetonitrile

Coupling: 3 minute coupling time recommended

Deprotection: Ammonium Hydroxide for 24 hrs at room temperature.

Storage: Freezer storage, -10 to -30°C, dry.

Stability in Solution: 2-3 days, <90% efficient after 4 days

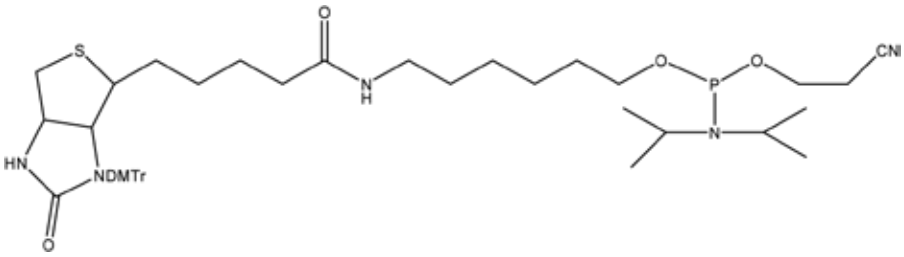
Store labeled oligo in the dark, either dry or in a neutral aqueous media at -20°C. Do not store crude fluorescently labeled oligonucleotides in ammonia

Biotin Phosphoramidites

5'-Biotin Phosphoramidite

[1-N-(4,4'-Dimethoxytrityl)-biotinyl-6-aminohexyl]-2-cyanoethyl-(N,N-diisopropyl)-phosphoramidite

Formula: $C_{46}H_{64}N_5O_6PS$
M.W.: 846.08



Catalogue number: 303-70

Diluent: Anhydrous Acetonitrile

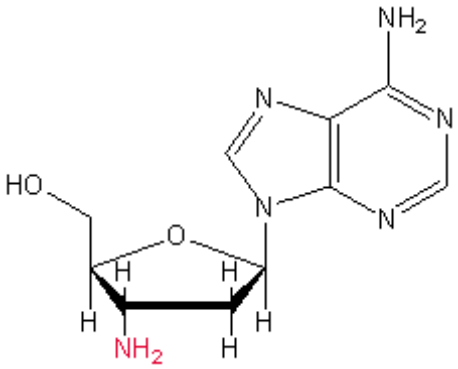
Coupling: 2 minute coupling time recommended

Deprotection: 5'-Biotin is slow to detritylate. If the final DMT-group is to be removed on the synthesizer, we recommend a second deblocking step.

Purine 3'-Amino -2', 3'-Dideoxy-nucleosides & Derivatives

3'-Amino-2',3'-Dideoxyadenosine

9-(3-Amino-2,3-dideoxy-ß-D-ribofuranosyl)adenine



Catalogue number: 203-11

CAS number: 7403-25-0

IUPAC name: 3'-Amino-2',3'-dideoxyadenosine

Purity: > 99%

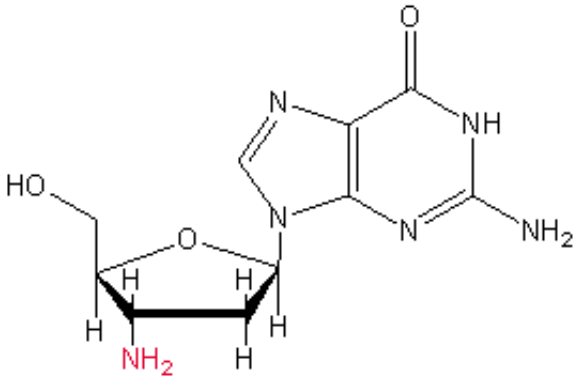
Description: white to off-white crystals

Storage of dry compound: 3 years at +4°C

Purine 3'-Amino -2', 3'-Dideoxy-nucleosides & Derivatives

3'-Amino-2',3'-Dideoxyguanosine

9-(3-Amino-2,3-dideoxy-ß-D-ribofuranosyl)guanine



Catalogue number: 203-10

CAS number: 66323-49-7

IUPAC name: 3'-Amino-2',3'-dideoxyguanosine

Purity: > 99%

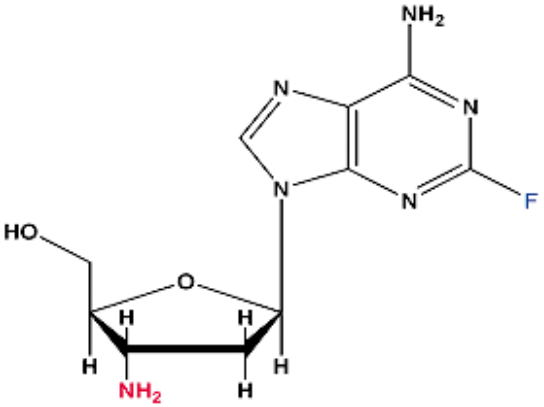
Description: white to off-white crystals

Storage of dry compound: 3 years at +4°C

Purine 3'-Amino -2', 3'-Dideoxy-nucleosides & Derivatives

3'- Amino-2',3'-dideoxy-2-fluoroadenosine

9-(3-amino-2,3-dideoxy- ß-D-ribofuranosyl)-2-fluoroadenine



Catalogue number: 203-30

IUPAC name: 3'- Amino-2',3'-dideoxy-2-fluoroadenosine

Purity: > 99%

Description: white to off-white crystals

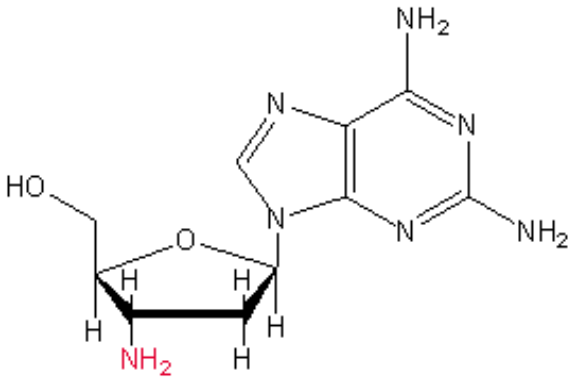
Storage of dry compound: 3 years at +4°C

Resistant to enzymatic deamination

Purine 3'-Amino -2', 3'-Dideoxy-nucleosides & Derivatives

3'-Amino-2',3'-Dideoxy-2,6 Diaminopurineriboside

9-(3-Amino-2,3-dideoxy-ß-D-ribofuranosyl)- 2,6-diaminopurine



Catalogue number: 203-12

IUPAC name: 3'-Amino-2',3'-dideoxy-2,6-di-aminopurineriboside

Purity: > 99%

Description: white to off-white crystals

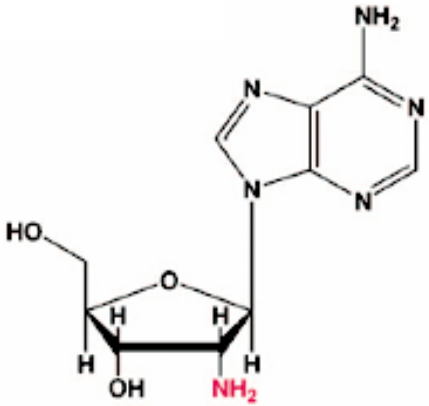
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

2'-Amino-2'-deoxyadenosine

9-(2-amino-2-deoxy-ß-D-ribofuranosyl)-adenine



Catalogue number: 203-27

CAS number: 10414-81-0

IUPAC name: 2'-Amino-2'-deoxyadenosine

Purity: > 99%

Description: white to off-white crystals

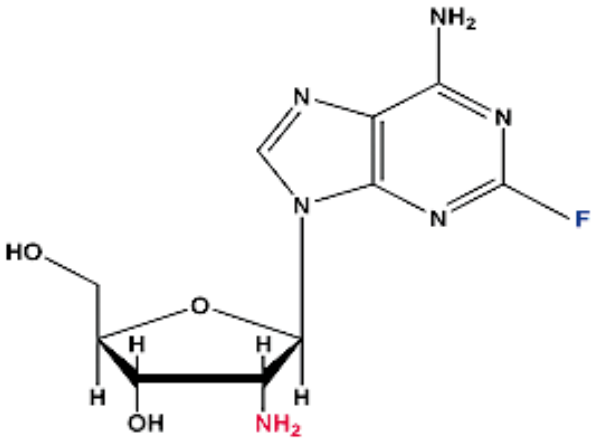
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

2'-Amino-2'-deoxy-2-fluoroadenosine

9-(2-amino-2-deoxy-ß-D-ribofuranosyl)-2-fluoroadenine



Catalogue number: 203-31

IUPAC name: 2'-Amino-2'-deoxy-2-fluoroadenosine

Purity: > 99%

Description: white to off-white crystals

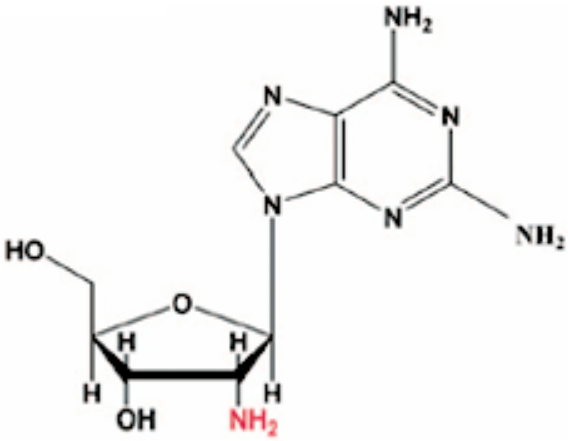
Storage of dry compound: 3 years at +4°C

Resistant to enzymatic deamination

Purine Nucleosides

2'-Amino-2'-deoxy-2,6-diaminopurineriboside

9-(2-amino-2-deoxy-ß-D-ribofuranosyl)-2,6-diaminopurine



Catalogue number: 203-28

IUPAC name: 2'-Amino-2'-deoxy-2,6-diaminopurineriboside

Purity: > 99%

Description: white to off-white crystals

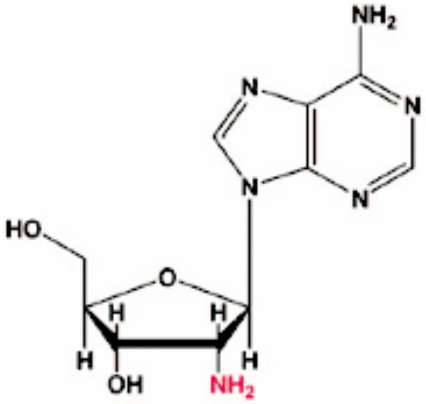
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

2'-Amino-2'-deoxyguanosine

9-(2-amino-2-deoxy-ß-D-ribofuranosyl)-guanine



Catalogue number: 203-29

CAS number: 60966-26-9

IUPAC name: 2'-Amino-2'-deoxyguanosine

Purity: > 99%

Description: white to off-white crystals

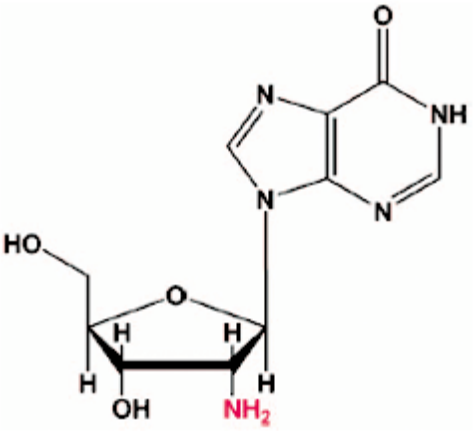
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

2'-Amino-2'-deoxyinosine

9-(2-amino-2-deoxy-ß-D-ribofuranosyl)-hypoxanthine



Catalogue number: 203-41

IUPAC name: 2'-Amino-2'-deoxyinosine

Purity: > 99%

Description: white to off-white crystals

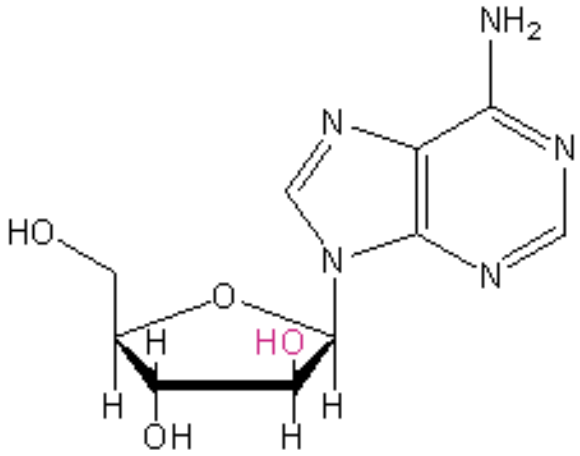
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

Arabinofuranosyl-Adenine

9-(ß-D-Arabinofuranosyl)adenine



Catalogue number: 203-05

CAS number: 5536-17-4

IUPAC name: Arabinofuranosyl-adenine

Purity: > 99%

Description: white to off-white crystals

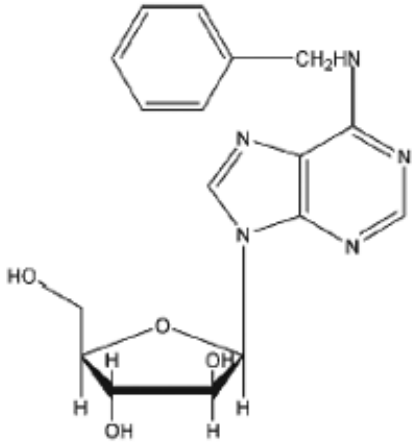
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

Arabinofuranosyl-6-Benzylaminopurine

9-(ß-D-arabinoribofuranosyl)-6-Benzylaminopurine



Catalogue number: 203-20

IUPAC name: Arabinofuranosyl-6-Benzyl-aminopurine

Purity: > 99%

Description: white to off-white crystals

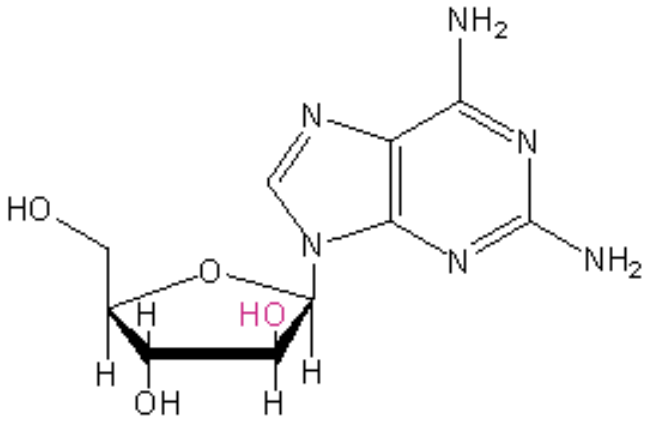
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

Arabinofuranosyl-2,6-Diaminopurine

9-(ß-D-Arabinofuranosyl)-2,6-diaminopurine



Catalogue number: 203-06

IUPAC name: Arabinofuranosyl-2,6- diaminopurine

Purity: > 99%

Description: white to off-white crystals

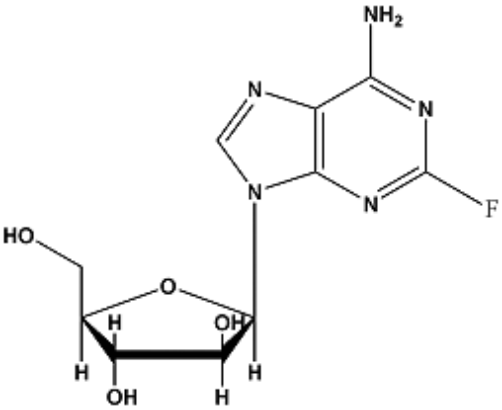
Storage of dry compound: 3 years at +4ºC

For bulk quantities please enquire

Purine Nucleosides

Arabinofuranosyl-2-fluoroadenine

9-(ß-D-arabinoribofuranosyl)-2-fluoroadenine



Catalogue number: 203-32

CAS number: 21679-14-1

IUPAC name: Arabinofuranosyl-2-fluoroadenine

Purity: > 99%

Description: white to off-white crystals

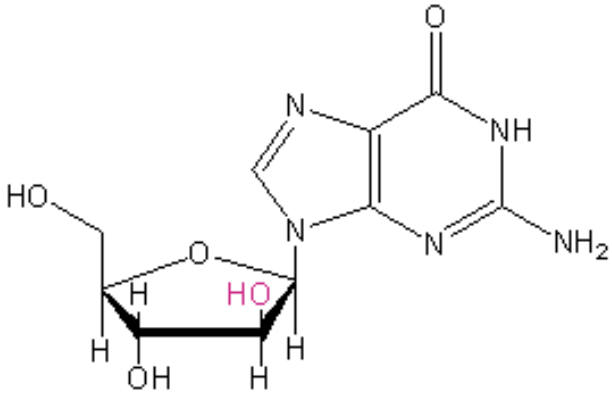
Storage of dry compound: 3 years at +4ºC

Resistant to enzymatic deamination

Purine Nucleosides

Arabinofuranosyl-Guanine

9-(ß-D-Arabinofuranosyl)guanine



Catalogue number: 203-03

CAS number: 38819-10-2

IUPAC name: Arabinofuranosyl-guanine

Purity: > 99%

Description: white to off-white crystals

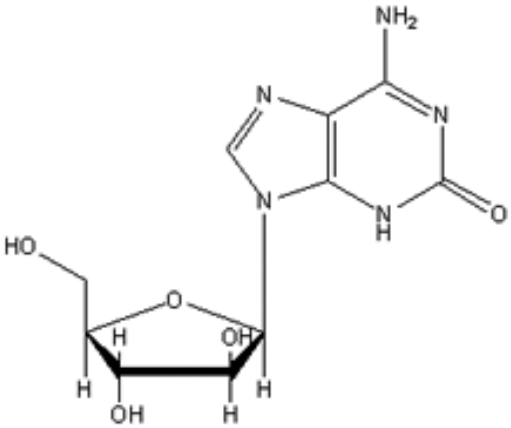
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

Arabinofuranosyl-isoguanine

9-(ß-D-arabinoribofuranosyl)-isoguanine



Catalogue number: 203-37

IUPAC name: Arabinofuranosyl-isoguanine

Purity: > 98%

Description: white to off-white crystals

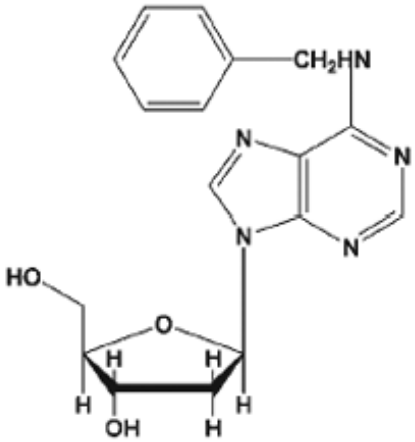
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

6-Benzylaminopurine 2'-deoxyriboside

9-(2-deoxy- ß-D-ribofuranosyl)-6-Benzylaminopurine



Catalogue number: 203-21

IUPAC name: 6-Benzylaminopurine 2'-deoxyriboside

Purity: > 99%

Description: white to off-white crystals

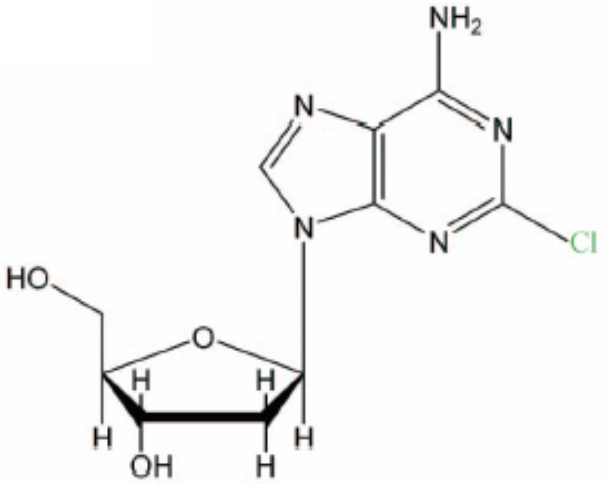
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

2-Chloro-2'-deoxyadenosine (2-CdA, cladribine)

9-(2-deoxy-ß-D-ribofuranosyl)-2-chloro-adenine



Catalogue number: 203-25

CAS number: 4291-63-8

IUPAC name: 2-Chloro-2'-deoxyadenosine

Purity: > 99%

Description: white to off-white crystals

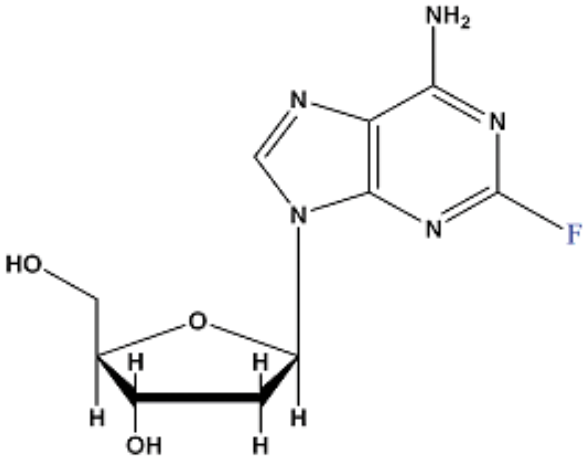
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

2'-deoxy-2-fluoroadenosine

(9-(2-deoxy-ß-D-ribofuranosyl)-2-fluoroadenine



Catalogue number: 203-35

CAS number: 21679-12-9

IUPAC name: 2'-deoxy-2-fluoroadenosine

Purity: > 99%

Description: white to off-white crystals

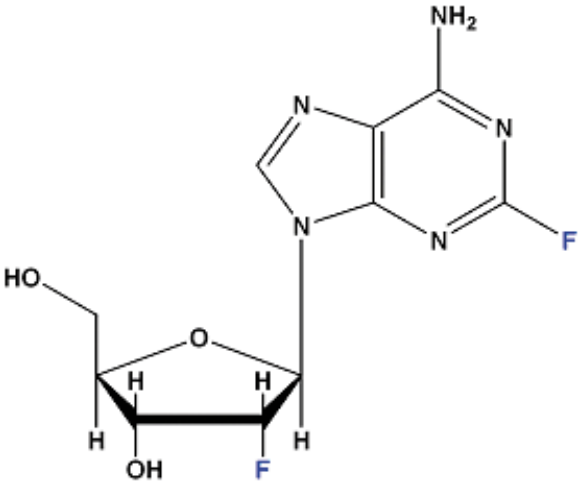
Storage of dry compound: 3 years at +4°C

Resistant to enzymatic deamination.

Purine Nucleosides

2'-Fluoro-2'-deoxy-2-fluoroadenosine

9-(2-fluoro-2-deoxy-ß-D-ribofuranosyl)-2-fluoroadenine



Catalogue number: 203-36

IUPAC name: 2'-deoxy-2'-fluoro-2-fluoro-adenosine

Purity: > 99%

Description: white to off-white crystals

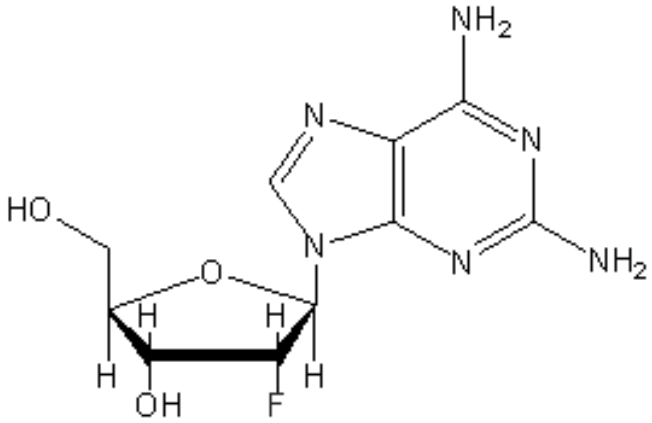
Storage of dry compound: 3 years at +4°C

Resistant to enzymatic deamination.

Purine Nucleosides

2'-Fluoro-2'-Deoxy-2,6-Diaminopurineriboside

9-(2-Deoxy-2-fluoro-ß-D-ribofuranosyl)-2,6-diaminopurine



Catalogue number: 203-18

IUPAC name: 2'-Deoxy-2'-fluoro-2,6-diaminopurineriboside

Purity: > 99%

Description: white to off-white crystals

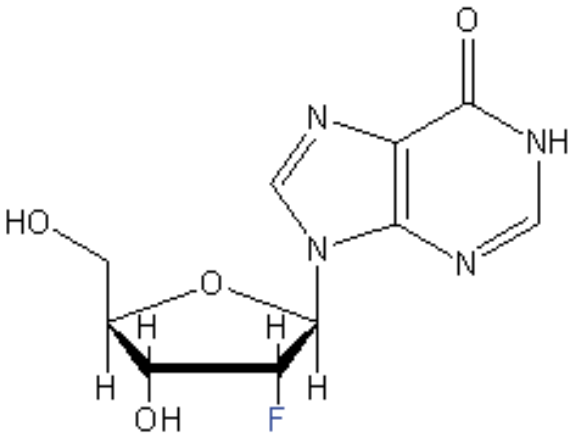
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

2'-Fluoro-2'-Deoxyinosine

9-(2-Deoxy-2-fluoro-ß-D-ribofuranosyl)hypoxanthine



Catalogue number: 203-14

IUPAC name: 2'-Deoxy-2'-fluoroinosine

Purity: > 99%

Description: white to off-white crystals

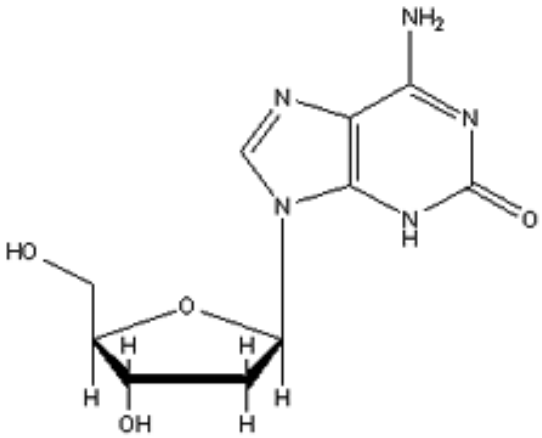
Storage of dry compound: 3 years at +4ºC

For bulk quantities please enquire

Purine Nucleosides

2'-deoxyisoguanosine

9-(2-deoxy-ß-D-ribofuranosyl)-isoguanine



Catalogue number: 203-38

CAS number: 106449-56-3

IUPAC name: 2'-Deoxyisoguanosine

Purity: > 98%

Description: white to off-white crystals

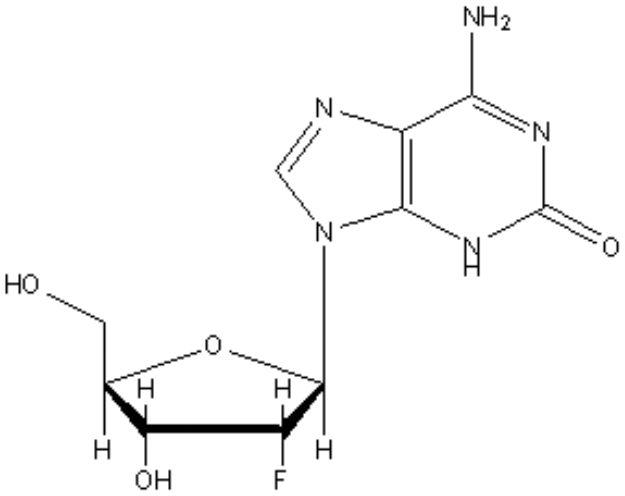
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

2'-deoxy-2'-fluoroisoguanosine

9-(2-deoxy-2-fluoro-ß-D-ribofuranosyl)-isoguanine



Catalogue number: 203-40

IUPAC name: 2'-Deoxy-2'-fluoroisoguanosine

Purity: > 98%

Description: white to off-white crystals

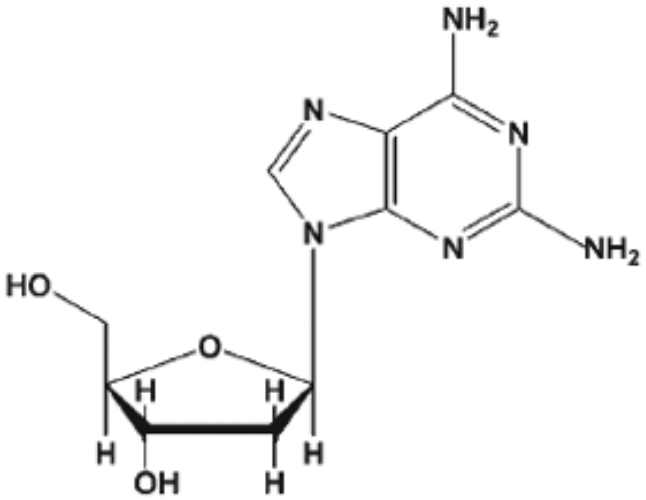
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

2,6-Diaminopurine 2'-deoxyriboside

9-(2-deoxy-ß-D-ribofuranosyl)-2,6-Diaminopurine



Catalogue number: 203-23

Description: white to off-white crystals

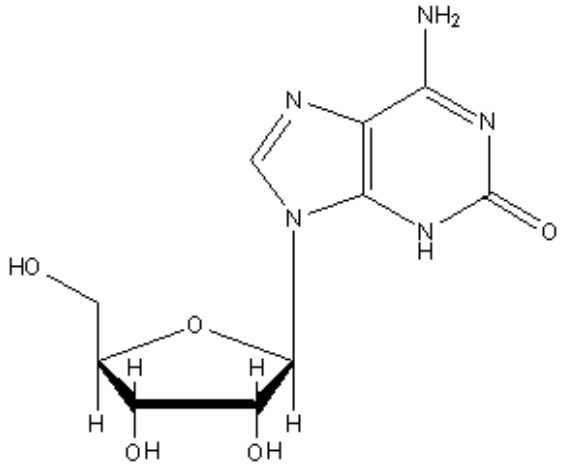
Storage of dry compound: 3 years at +4°C

For bulk quantities please enquire

Purine Nucleosides

Isoguanosine

9-(ß-D-ribofuranosyl)-isoguanine



Catalogue number: 203-39

CAS number: 1818-71-9

IUPAC name: Isoguanosine

Purity: > 98%

Description: white to off-white crystals

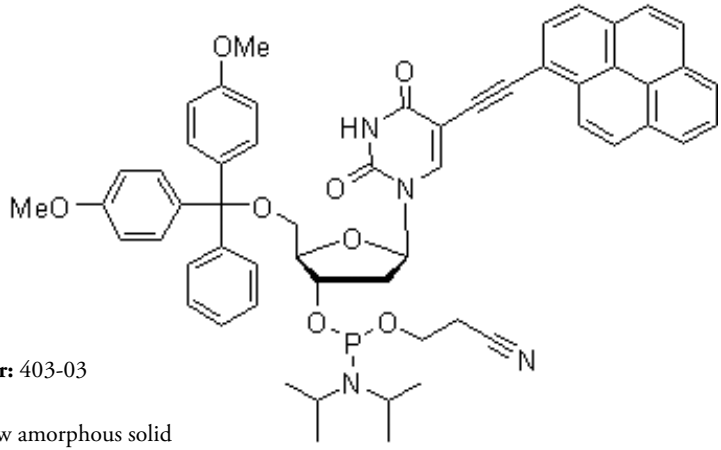
Storage of dry compound: 3 years at +4ºC

For bulk quantities please enquire

Modifying nucleosides

Pyrene Derivative

3'-O-(diisopropylamino-2-cyanethoxyphosphinyl)-5'-O-(4,4'-dimethoxytrityl)-5-(pyren-1-ylethynyl)-2'-deoxyuridine



Catalogue number: 403-03

Appearance: Yellow amorphous solid

Diluent: Mixture CH3CN - CH2Cl2 (1:1), v/v

Coupling: 5 minute coupling time recommended

Storage: Freezer storage, -10 to -30°C, dry.

Stability: 3-4 days, <90% efficient after 5 days

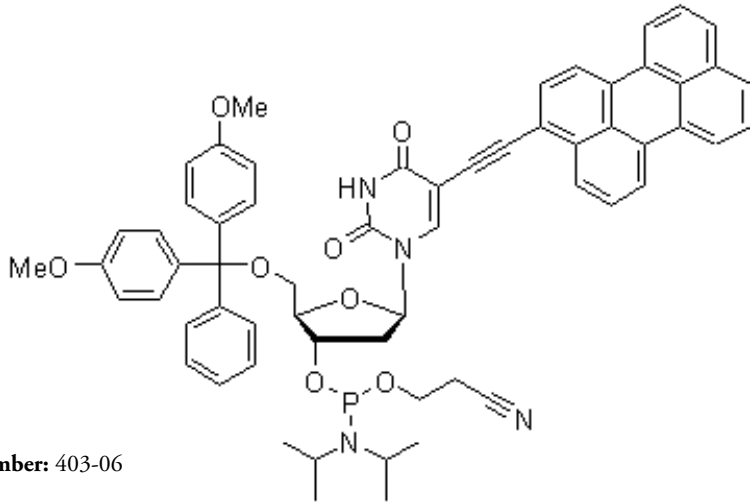
Store labeled oligo in the dark.

5-(Pyren-1-ylethynyl)-2'-deoxyuridine contains pyrene chromophore conjugated with nucleobase through the triple bond. Its fluorescent properties are different from those of non-conjugated pyrene thus making this nucleoside suitable for hybridization studies including FRET, mismatch detection, electron injection studies, and other applications.

Modifying nucleosides

Pyrelene Derivative

3'-O-(N,N-diisopropylamino-2-cyanethoxyphosphinyl)-5'-O-(4,4'-dimethoxytrityl)-5-(perylen-3-ylethynyl)-2'-deoxyuridine



Catalogue number: 403-06

Appearance: Orange amorphous solid

Diluent: Mixture CH3CN - CH2Cl2 (1:1), v/v

Coupling: 5 minute coupling time recommended

Storage: Freezer storage, -10 to -30°C, dry.

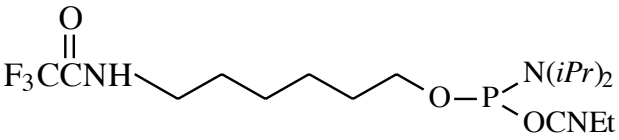
Stability: 3-4 days, <90% efficient after 5 days

Store labeled oligo in the dark.

5-(Perylen-3-ylethynyl)-2'-deoxyuridine contains perylene conjugated to uracil. Emission wavelength maximum is 490 nm. In DNA probes this compound shows increase in fluorescence intensity.

Aminolinker Phosphoramidites

C6 TFA Aminolinker Phosphoramidite



Catalogue number: 501-01

Purity: > 90%

Formula: $C_{17}H_{31}F_3N_3O_3P$

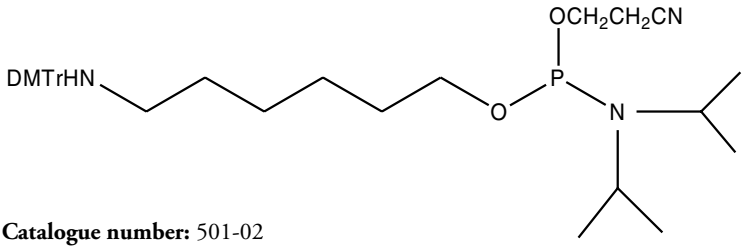
Dilution (for 0.1M): 0.25g/6.0 ml
1.0g/24.0 ml

Description: Colorless to light yellow oil

Storage: Frozen, -10 to -20°C

Aminolinker Phosphoramidites

DMT C6-Aminolinker Phosphoramidite



Catalogue number: 501-02

Purity: > 90%

Formula: $C_{36}H_{50}N_3O_4P$

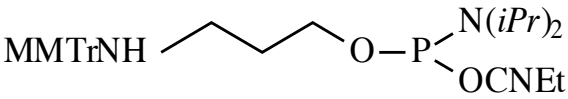
Dilution (for 0.1M): 0.25g/4.03 ml
1.0g/16.1 ml

Description: Colorless to light yellow oil

Storage: -20°C

Aminolinker Phosphoramidites

C3 MMTr-Aminolinker Phosphoramidite



Catalogue number: 501-03

Purity: > 95%

Formula: $C_{32}H_{42}N_3O_3P$

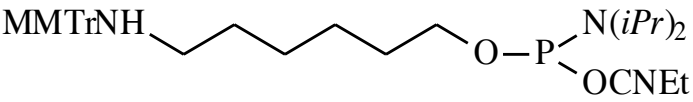
Dilution (for 0.1M): 0.25g/4.56 ml
1.0g/18.2 ml

Description: Colorless to light yellow oil

Storage: Refrigerated, 2-8°C

Aminolinker Phosphoramidites

C6 MMTr-Aminolinker Phosphoramidite



Catalogue number: 501-04

Purity: > 90%

Formula: $C_{35}H_{48}N_3O_3P$

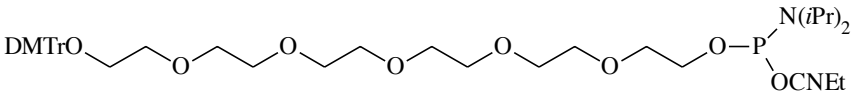
Dilution (for 0.1M): 0.25g/4.2 ml
1.0g/17 ml

Description: Colorless to light yellow oil

Storage: Refrigerated, 2-8°C

Spacer Phosphoramidites

Spacer 18 Phosphoramidite



Catalogue number: 501-05

Purity: > 90%

Formula: $C_{42}H_{61}N_2O_{10}P$

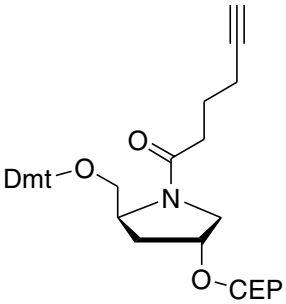
Dilution (for 0.1M): 0.25g/3.2 ml
1.0g/12.7 ml

Description: Colorless to light yellow oil

Storage: Frozen -10 to -20°C

Acetylenic Amidites

Reagent I-amidite



Catalogue number: 501-06

Purity: > 95%

A hydroxyprolinol-derived reagent (enantiomerically pure). Suitable for 5' and internal labeling. Stable to all ONS steps and ammonolysis. Oligonucleotides synthesized undergo smooth conjugation to azides in the presence of copper(I) species.

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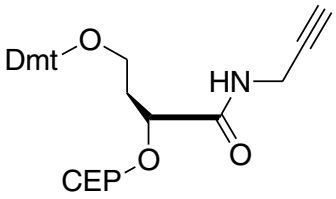
Reagent 2-amidite



Catalogue number: 501-07

Purity: > 95%

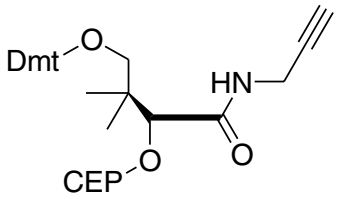
A 2,4-dihydroxybutyramide-derived reagent, enantiomerically pure. Suitable for 5' and internal labeling. Stable to all ONS steps. When on 5', stable to ammonolysis with DMT-on. Oligonucleotides synthesized undergo smooth conjugation to azides in the presence of copper(I) species. When the label is 5'-terminal, oligonucleotide should be subjected to ammonolysis only in DMT-on mode.

References:

1. Dioubankova, N.N.; Malakhov, A.D.; Stetsenko, D.A.; Gait, M.J.; Korshun, V.A. Phosphoramidites and solid supports based on N-substituted 2,4-dihydroxybutyramides: universal reagents for synthesis of modified oligonucleotides. Tetrahedron, **2006,** 62, 6762–6773.
2. Ustinov, A.V.; Dubnyakova, V.V.; Korshun, V.A. Perylene Diimide-Oligonucleotide Conjugates Constructed by Click Chemistry. Nucleosides Nucleotides & Nucleic Acids, **2007,** 26, 751–754.
3. Ustinov, A.V.; Dubnyakova, V.V.; Korshun, V.A. A convenient "click chemistry" approach to perylene diimide–oligonucleotide conjugates. Tetrahedron, **2008,** in press.

Acetylenic Amidites

Reagent 3-amidite



Catalogue number: 501-08

Purity: > 95%

A 3,3-dimethyl-2,4-dihydroxybutyramide-derived reagent, enantiomerically pure. Suitable for 5' and internal labeling. Stable to all ONS steps. When on 5', stable to ammonolysis with DMT-on. When the label is 5'-terminal, oligonucleotide should be subjected to ammonolysis only in DMT-on mode.

References:

1. Dioubankova, N.N.; Malakhov, A.D.; Stetsenko, D.A.; Gait, M.J.; Korshun, V.A. Phosphoramidites and solid supports based on N-substituted 2,4-dihydroxybutyramides: universal reagents for synthesis of modified oligonucleotides. Tetrahedron, **2006,** 62, 6762–6773.

Prices

Cat.#	Name	Page	Unit	Price, EUR	Price, USD*
2'-Fluoro-2'-deoxynucleosides & Derivatives					
203-15	2'-Fluoro-2'-Deoxyguanosine	3	1 g	225	315
			10 g	1500	2100
			100 g	4670	6538
			1 kg	request	request
203-17	2'-Fluoro-2'-Deoxyadenosine	4	1 g	210	295
			10 g	1400	1960
			100 g	4000	5600
			1 kg	request	request
203-50	2'-Fluoro-2'-Deoxyguanosine-3'-CE-phosphoramidite	5	1 g	225	315
			10 g	2000	2800
			100 g	14000	18900
			1 kg	request	request
203-51	2'-Fluoro-2'-Deoxyadenosine-3'-CE-phosphoramidite	6	1 g	220	308
			10 g	2000	2800
			100 g	13500	18300
			1 kg	request	request
203-52	2'-Fluoro-2'-Deoxyuridine-3'-CE-phosphoramidite	7	1 g	80	110
			10 g	650	910
			100 g	4500	6300
			1 kg	request	request
203-53	2'-Fluoro-2'-Deoxycytidine-3'-CE-phosphoramidite	8	1 g	80	110
			10 g	650	910
			100 g	4500	6300
			1 kg	request	request
104-01	2'-Fluoro-2'-deoxyadenosine-5'-Triphosphate	9	10 µmol	75	105
104-02	2'-Fluoro-2'-deoxycytidine-5'-Triphosphate	9	10 µmol	75	105
104-03	2'-Fluoro-2'-deoxyguanosine-5'-Triphosphate	9	10 µmol	75	105
104-04	2'-Fluoro-2'-deoxyuridine-5'-Triphosphate	9	10 µmol	75	105
104-05	2'-Fluoro-2'-deoxynucleoside-5'-Triphosphate Kit, containing 5 µmol each	9	20 µmol, (4x5 µmol)	145	205
103-30	2'-F-Nucleoside bound Solid Supports (F-CS-supports)	11	1g	40	55
			10g	35	50

Prices

Cat.#	Name	Page	Unit	Price, EUR	Price, USD*
Reagents for RNA and DNA synthesis					
103-00	Universal Solid Support III	13		request	request
103-10	Chemical Phosphorylation Reagent II	14		request	request
103-20	Trimer (Codon) Phosphoramidites	15		request	request
103-21	Dimer Phosphoramidites	17		request	request
103-31	2'-Deoxynucleoside bound Solid Supports (CS-supports)	19		request	request
2'-Fluoro-2'-deoxyarabinonucleosides (FANA) & Derivatives					
105-01	2'-FANA-A	21	0,5 g	300	420
			1 g	550	770
			10 g	3500	4900
105-02	2'-FANA-DAP	22	0,5 g	310	435
			1 g	570	790
			10 g	3700	5180
105-03	2'-FANA-G	23	0,5 g	330	460
			1 g	600	840
			10 g	3800	5320
105-04	2'-FANA-I	24	0,5 g	320	450
			1 g	590	825
			10 g	3690	5165
105-05	2'-FANA-T	25	0,5 g	110	155
			1 g	190	165
			10 g	1190	1665
105-06	2'-FANA-C	26	0,5 g	150	210
			1 g	280	390
			10 g	1750	2450

Prices

Cat.#	Name	Page	Unit	Price, EUR	Price, USD*
Biotin Labeled Triphosphates					
303-31	Biotin-11-UTP	27	1 µMol	360	505
			10 µMol	2755	3860
			100 µMol	11020	15430
303-11	Biotin-11-dUTP	28	1 µMol	230	320
			10 µMol	2175	3045
			100 µMol	8700	12180
303-21	Biotin-11-dCTP	29	1 µMol	230	320
			10 µMol	2175	3045
			100 µMol	8700	12180
303-71	Biotin-11-dATP	30	0,25 µMol	380	530
			1 µMol	1450	2030
			10 µMol	8265	11570
303-14	Biotin-16-dUTP	31	1 µMol	230	320
			10 µMol	2175	3045
			100 µMol	8700	12180
303-72	Biotin-11-dGTP	32	0,25 µMol	380	530
			1 µMol	1450	2030
			10 µMol	8265	11570
Fluorscein Labeled Triphosphates					
303-12	6-FAM-11-dUTP	33	0,5 µMol	300	420
			1 µMol	550	770
			10 µMol	2755	3860
			100 µMol	8265	15430
303-22	6-FAM-11-dCTP	34	0,5 µMol	300	420
			1 µMol	550	770
			10 µMol	2755	3860
			100 µMol	11020	15430

Prices

Cat.#	Name	Page	Unit	Price, EUR	Price, USD*
303-32	6-FAM-11-UTP	35	0,5 µMol 1 µMol 10 µMol 100 µMol	300 550 2755 11020	420 770 3860 15430
303-80	6-FAM-11-dATP	36	0,25 µMol 1 µMol 10 µMol	425 1650 8265	595 2310 11570
SIMA Phosphoramidites and CPG					
303-55	SIMA phosphoramidite	37	0,5 g 1 g 10 g	230 435 4250	320 610 5950
303-56	6-SIMA-dT	38	250 mg 1 g	360 1160	505 1625
303-57	5-SIMA phosphoramidite	39	0.5 g 1 g 10 g	230 435 4250	320 610 5950
303-58	6-SIMA-CPG	40	1 g	725	1015
FAM Phosphoramidites and CPG					
303-41	5'-Fluorescein phosphoramidite (6-FAM)	41	1 g 10 g	290 2900	405 4060
303-42	5'-Fluorescein phosphoramidite (5-FAM)	42	1 g 10 g	290 2900	405 4060
303-43	Fluorescein phosphoramidite (I)	43	0,5 g 1 g 10 g	230 435 3265	320 610 5075
303-44	Fluorescein phosphoramidite (II)	44	0,5 g 1 g 10 g	230 435 3625	320 610 5075

Prices

Cat.#	Name	Page	Unit	Price, EUR	Price, USD*
303-45	6-Fluorescein dT phosphoramidite	45	0,5 g 1 g 10 g	360 680 5075	505 950 7105
303-46	5-Fluorescein dT phosphoramidite	46	0,5 g 1 g 10 g	360 680 5075	505 950 7105
303-47	3'-(6-Fluorescein)-CPG	47	1 g 10 g	220 1450	310 2030
303-48	3'-(5-Fluorescein)-CPG	48	1 g 10 g	220 1450	310 2030
HEX Phosphoramidites					
303-51	HEX phosphoramidite	49	0,5 g 1 g 10 g	230 435 4350	320 610 6090
303-59	5-HEX phosphoramidite	50	1 g 10 g	290 2900	405 4060
TET Phosphoramidites					
303-61	TET phosphoramidite	51	0,5 g 1 g 10 g	230 435 4350	320 610 6090
303-65	5-TET phosphoramidite	52	1 g 10 g	290 2900	410 4060
Biotin Phosphoramidites					
303-70	5'-Biotin Phosphoramidite	53	250 mg 1 g	110 290	155 405

Prices

Cat.#	Name	Page	Unit	Price, EUR	Price, USD*
Purine 3'-Amino-2',3'-Dideoxynucleosides & Derivatives					
203-11	3'- Amino-2',3'-dideoxyadenosine	54	250 mg 1 g 10 g	40 90 600	55 125 840
203-10	3'- Amino-2',3'-dideoxyguanosine	55	250 mg 1 g 10 g	50 120 800	70 170 1120
203-30	3'- Amino-2',3'-dideoxy-2-fluoroadenosine	56	250 mg 1 g 10 g	115 270 1800	160 380 2520
203-12	3'-Amino-2',3'-dideoxy-2,6-diaminopurineriboside	57	250 mg 1 g 10 g	45 105 700	60 150 980
Purine Nucleosides					
203-27	2'-Amino-2'-deoxyadenosine	58	250 mg 1 g 10 g	150 345 2300	210 485 3220
203-31	2'-Amino-2'-deoxy-2-fluoroadenosine	59	250 mg 1 g 10 g	220 525 3500	310 735 4900
203-28	2'-Amino-2'-deoxy-2,6-diaminopurineriboside	60	250 mg 1 g 10 g	130 300 2000	180 420 2800
203-29	2'-Amino-2'-deoxyguanosine	61	250 mg 1 g 10 g	160 375 2500	225 525 3500
203-41	2'-Amino-2'-deoxyinosine	62	250 mg 1 g 10 g	130 300 2000	180 420 2800

Prices

Cat.#	Name	Page	Unit	Price, EUR	Price, USD*
203-05	Arabinofuranosyl-adenine	63	250 mg 1 g 10 g	20 45 300	30 65 420
203-20	Arabinofuranosyl-6-Benzylaminopurine	64	250 mg 1 g 10 g	85 195 1300	120 275 1820
203-06	Arabinofuranosyl-2,6- diaminopurine	65	250 mg 1 g 10 g	20 45 300	30 65 420
203-32	Arabinofuranosyl-2-fluoroadenine	66	250 mg 1 g 10 g	100 225 1500	140 315 2100
203-03	Arabinofuranosyl-guanine	67	250 mg 1 g 10 g	35 75 500	50 105 700
203-37	Arabinofuranosyl-isoguanine	68	250 mg 1 g 10 g	290 675 4500	405 945 6300
203-21	6-Benzylaminopurine 2'-deoxyriboside	69	250 mg 1 g 10 g	85 195 1300	120 275 1820
203-25	2-Chloro-2'-deoxyadenosine	70	250 mg 1 g 10 g	80 220 1500	115 310 2100
203-35	2'-deoxy-2-fluoroadenosine	71	250 mg 1 g 10 g	85 195 1300	120 275 1820
203-36	2'-deoxy-2'-fluoro-2-fluoroadenosine	72	250 mg 1 g 10 g	290 675 4500	410 945 6300

Prices

Cat.#	Name	Page	Unit	Price, EUR	Price, USD*
203-18	2'-Deoxy-2'-fluoro-2,6-diaminopurineriboside	73	250 mg 1 g 10 g	100 240 1600	140 340 2240
203-14	2'-Deoxy-2'-fluoroinosine	74	250 mg 1 g 10 g	85 195 1300	120 275 1820
203-38	2'-Deoxyisoguanosine	75	250 mg 1 g 10 g	130 300 2000	180 420 2800
203-40	2'-Deoxy-2'-fluoroisoguanosine	76	250 mg 1 g 10 g	290 675 4500	410 945 6300
203-23	2,6-Diaminopurine 2'-deoxyriboside	77	250 mg 1 g 10 g	35 75 500	50 105 700
203-39	Isoguanosine	78	250 mg 1 g 10 g	170 390 2600	240 545 3640
Modifying Nucleosides					
403-03	Pyrene Derivative	79	250 mg 1 g 10 g	200 670 6000	280 940 8400
403-06	Pyrelene Derivative	80	250 mg 1 g 10 g	280 960 8700	395 1345 12180

Prices

Cat.#	Name	Page	Unit	Price, EUR	Price, USD*
Aminolinker Phosphoramidites					
501-01	C6 TFA Aminolinker Phosphoramidite	81	250 mg	25	35
501-02	DMT C6-Aminolinker Phosphoramidite	82	250 mg	40	55
501-03	C3 MMTr-Aminolinker Phosphoramidite	83	250 mg	55	80
501-04	C6 MMTr-Aminolinker Phosphoramidite	84	250 mg	40	55
Spacer Phosphoramidites					
501-05	Spacer 18 Phosphoramidite	85	250 mg	85	120
Acetylenic Amidites					
501-06	Reagent 1-amidite	86	250 mg	150	210
			1 g	540	755
			10 g	4800	6720
501-07	Reagent 2-amidite	87	250 mg	130	180
			1 g	430	600
			10 g	3900	5460
501-08	Reagent 3-amidite	88	250 mg	100	140
			1 g	360	505
			10 g	2900	4060

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Payment net 30 days, wire transfer, Prices are ex-works Finland.
Prices in Euro are valid through December 31st, 2009.
*Metkinen Chemistry reserves the right to re-quote USD price for any item.
Standard Metkinen Chemistry Oy sales terms apply.

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ORDERING INFORMATION

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