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## Custom Oligonucleotide Modification Guide

### PLACING AN ORDER

#### Sequence Information (canonical nucleosides):

For standard DNA/RNA/LNA oligonucleotides, please provide the sequence information in the following style:

DNA = ACTG, U = 2'-Desoxyuridine; RNA = ACUG LNA = ACTG

For mixtures of different types please use for DNA bases normal letters, for RNA bases an introduced "r" and for LNA an introduced "+": e.g. GGrCrG+T+T

#### Synthesis Scale

Oligonucleotides can be synthesized on the following scales:

DNA = 40 nmol, 200 nmol, 1  $\mu$ mol; RNA = 200 nmol, 1  $\mu$ mol; LNA = 40 nmol, 200 nmol, 1  $\mu$ mol

Large scale syntheses and yield syntheses are also available upon customer request.

#### Purification and Format

Oligonucleotides are purified by reverse-phase high performance liquid chromatography (RP-HPLC). De-salted oligos (without HPLC purification) are also available upon customer request. All oligonucleotides are lyophilized unless otherwise specified. Oligonucleotides may also be ordered as concentrated solutions upon customer request.

#### Degenerated/Wobble Bases

A mixture of different bases at the same nucleoside position is referred to as a wobble base. For wobble-base requests, please use the universal nomenclature (IUPC code).

<b>Letter Symbol</b>	M	R	W	S	Y	K	V	H	D	B	N
<b>Base Mixture</b>	AC	AG	AT	GC	CT	GT	AGC	ACT	AGT	GCT	AGCT

#### Standard Modifications:

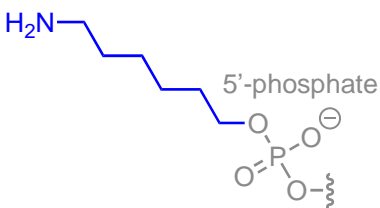
Modifications should be designated with an X, L, or Z, and the appropriate structure selected from the drop-down menu.

#### Non-Standard Modifications

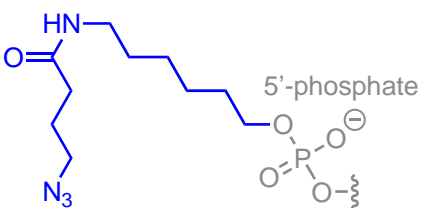
baseclick offers over 50 diverse chemical modifications that do not appear in our standard catalogue. To request a special modification, please leave a comment in the field underneath your oligo request.

## Standard 5'-Modifications

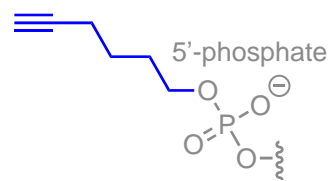
- The following modifications are immediately available at baseclick:



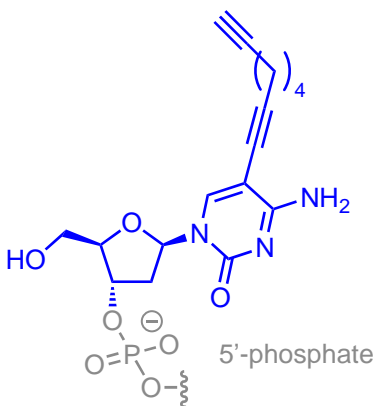
**5'-Amino-C6**



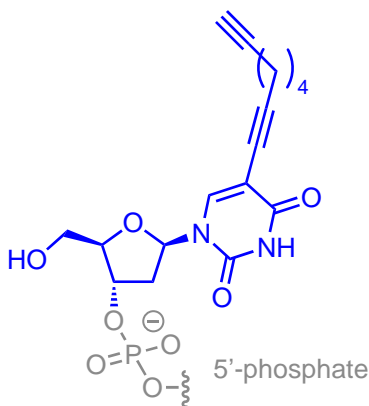
**5'-Azide**



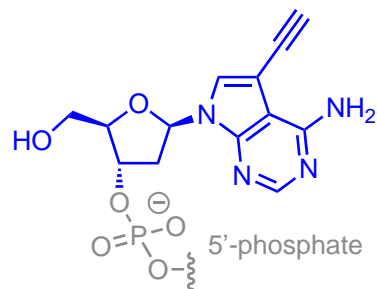
**5'-Hexynyl**



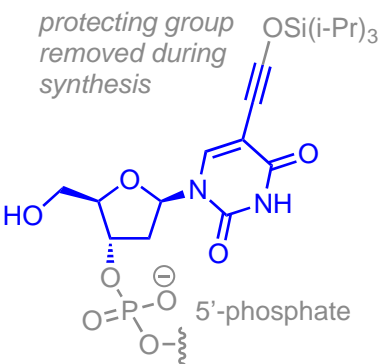
**C8-Alkyne-dC**



**C8-Alkyne-dU**



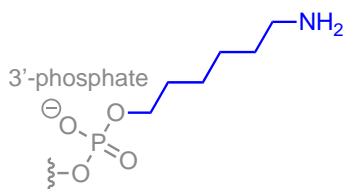
**7-Ethynyl-dA**



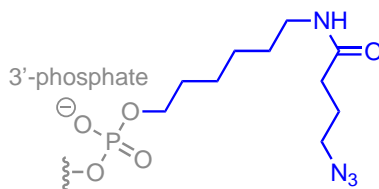
**TIPS-Edu**

## Standard 3'-Modifications

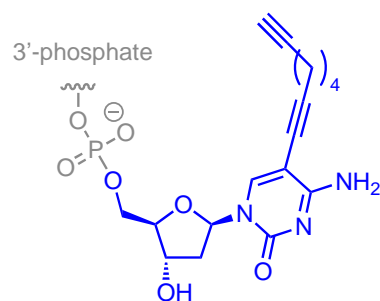
- The following modifications are immediately available at baseclick:



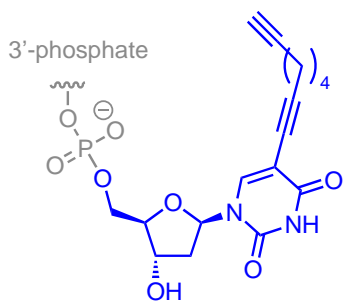
*3'-Amino-C6*



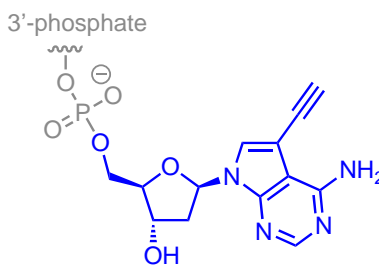
*3'-Azide*



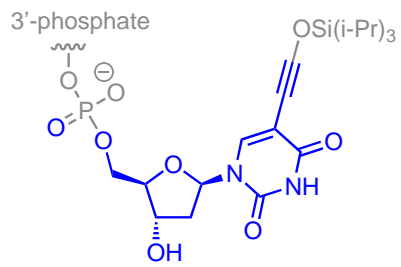
*C8-Alkyne dC*



*C8-Alkyne-dU*



*7-Ethynyl-dA*

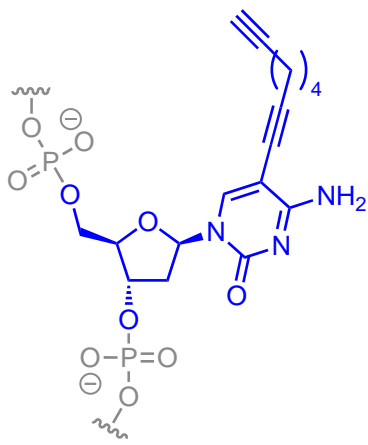


*protecting group  
removed during  
synthesis*

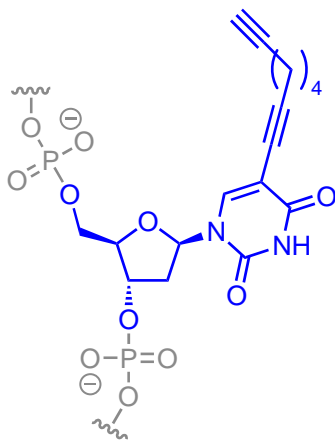
*TIPS-EdU*

## Standard Internal Modifications

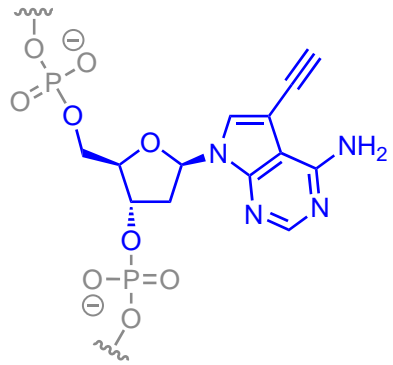
- The following modifications are immediately available at baseclick:



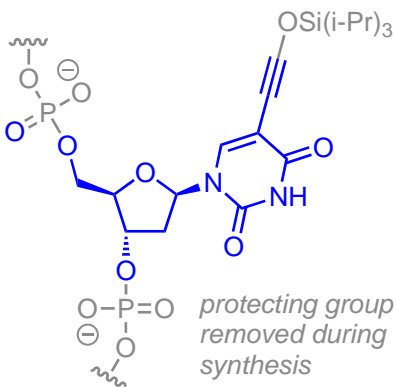
*C8-Alkyne dC*



*C8-Alkyne-dU*



*7-Ethynyl-dA*



*TIPS-EdU*

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## Special (Non-Standard Modifications)

- The following modifications may be available upon request. To inquire if these or any other modifications are available, please leave a comment in the appropriate field of your request.

### Modification 5'

6-FAM  
Amino Modifier C12  
BHQ1  
BHQ2  
Biotin  
Biotin-TEG  
Cy3  
Cy5  
Cy5.5  
Maleimide  
PEG5/10/20kDA  
TAMRA

### Internal Modification

AbasicAlkyne  
AbasicAmine  
BHQ1  
BHQ1-dT  
BHQ2  
BHQ2-dT  
FAM dT/dC/dA  
DBCO(C2)-dT/dC/dA  
DBCO(PEG4)-dT/dC/dA

### Modification 3'

6-FAM  
BHQ0  
BHQ1  
BHQ2  
BHQ3  
Biotin  
Cy3  
Cy5  
ddC  
TAMRA

### NHS-Ester and Click-Modifications

- Various modifications are available upon customer inquiry.

**Don't see your desired modification here? Submit an inquiry through the online portal, and your special oligo may still be synthesizable.**