

Synthetic oligonucleotides are purchased from IDT, Integrated DNA Technologies, Inc <https://www.idtdna.com/pages>

Primers

✓ You will be ordering the six LAMP primers listed in the table below.

✓ Download an Excel spreadsheet with this information from the 'Resources' section of the

[UCCE-Napa website](#)

Name	Sequence	Scale	Purification
p1825, LAMP.168-F3	GAATCGTTTGAATCGTAAGAGA	250 nmole DNA Oligo	Standard Desalting
p1826, LAMP.168-B3	CAGACAAATAAATACGATTCCTTTC	250 nmole DNA Oligo	Standard Desalting
p1827, LAMP.168-FIP	AATGACTCCTGCGGCTTCTTCGTATTTGGGTTCAAGA	1 umole DNA Oligo	Standard Desalting
p1828, LAMP.168-BIP	TCAAAGACGTCTGCTGGTTGCATCATTACGCTCCTCCACC	1 umole DNA Oligo	Standard Desalting
p1842, LAMP.168-LB	GCTTTTAAAAACGACGTGT	250 nmole DNA Oligo	Standard Desalting
p1857, LAMP.168-LF	TTCACGCCAACAACAAGT	250 nmole DNA Oligo	Standard Desalting

STEP 1

✓ Go to the IDT DNA technologies page

✓ Under the Products and Services Tab, Click on Custom DNA Oligos

The screenshot shows the IDT website header with the logo and navigation menu. The 'PRODUCTS & SERVICES' tab is highlighted with a red circle. The dropdown menu is open, displaying the following categories:

- COVID-19 SOLUTIONS**
 - Coming soon: SARS-CoV-2/Flu Test
 - CDC assay
 - Charité/Berlin assay
 - Luminex assay
 - Custom detection panels
 - ARTIC V3 primer set
 - NGS solutions
 - Cas13 guide RNAs
 - Affinity Plus ASOs
 - Genes & gene fragments
 - Media information
- DNA & RNA**
 - Custom DNA oligos
 - Custom RNA oligos
 - Affinity Plus DNA & RNA oligos
 - DNA oligo pools
 - Large-scale synthesis
 - SameDay oligos
 - Inventoried oligos
 - Oligo modifications
- GENES & GENE FRAGMENTS**
 - Double-stranded DNA fragments
 - Single-stranded DNA fragments
 - Custom gene synthesis
 - DNA Origami
- NEXT GENERATION SEQUENCING**
 - Adapters
 - Library preparation
 - Hybridization capture
 - Amplicon sequencing
 - IDT Align Program
 - xGen Exome Research Panel v2

STEP 2

- ✓ Under Custom DNA oligos, select “Order Now” and “Order in tubes”

Custom DNA oligos

IDT's long-standing reputation as a pioneer and leader in custom oligo manufacturing is primarily due to our proprietary: our manufacturing process are designed and developed in-house, including specialized synthesizers that accommodate high-throughput automation systems that ensure fast turnaround times. We do not rely on third-party manufacturers for synthesis, allowing us to easily refine equipment and reagents as necessary. Our ability to control these variables unmatched in quality and consistency for use in routine and specialized applications.

DNA oligos »

Single-stranded, pooled, or duplexed DNA, synthesized to your specifications. Import multiple sequences from an Excel spreadsheet or individually using our convenient online tools.

ORDER NOW ↖

Order in tubes ↖

All ordering options

STEP 3

- ✓ The Oligo Entry form will pop up. Select “Bulk Input”



PRODUCTS & SERVICES ▾

APPLICATIONS & TECHNOLOGIES ▾

SUPPORT & EDUCATION ▾

TR

Oligo Entry

Select All ACTIONS: ▾ # of Items: 1 GO **BULK INPUT**

1 Item Name * ⓘ 

Scale ⓘ 25 nmole DNA oligo ▾	Formulation None ▾
Sequence * (5' → 3') 5' MOD ▾ INTERNAL ▾ 3' MOD ▾ BASES ▾ <input type="text"/>	Purification Standard Desalting ▾
# Bases: 0 (Min:15 Max:60) Min Yield: 0 nmoles	Services No services are available on this scale
GC: % Tm: °C ⚙️ DeltaG: kcal/mole	

STEP 4

✓ Choose “File Upload” and upload the Excel spreadsheet with the six primers

Bulk Input ×

Questions about using this page? [Watch a video demo.](#)

Choose a delimiter OR **File Upload**

[Download an Excel template](#)

Tab/Excel ▾ Choose File no file selected

-----Name & Sequence are required.-----Default scale is 25nmole.-----
-----Default purification is standard desalt.-----Purification options vary by
scale.-----Do not include column header row.-----Example:Seq1
ATCGTATGCTGATCTGATCAC 25nm STDSeq2 AACGTTTGCTGATCTAATCAC 25nm
STDSeq3 TTCGCATGCCGATCAGATCAC 25nm STDEtc...

Code	Scale
25nm	25 nmole
100nm	100 nmole
250nm	250 nmole
1um	1 μmole
2um	2 umole
5um	5 μmole
10um	10 μmole
4nmU	4 nmole Ultramer™
20nmU	20 nmole Ultramer™
PU	PAGE Ultramer™
25nmS	25 nmole Sameday

Primers_Order_Form_Example.xlsx

Cancel Upload

20nmU 20 nmole Ultramer™

STEP 5

✓ This upload window will pop-up and you can choose the [Excel spreadsheet](#) with the six primers

STEP 6

✓ The information from the spreadsheet will populate the box.
Then, click on “Update”

Choose a delimiter OR File Upload

[Download an Excel template](#)

Tab/Excel Choose File no file selected

p1825, LAMP.168-F3 Standard Desalting	GAATCGTTTGAATCGTAAGAGA	250 nmole DNA Oligo
p1826, LAMP.168-B3 Standard Desalting	CAGACAAATAAATACGATTCCTTTC	250 nmole DNA Oligo
p1827, LAMP.168-FIP umole DNA Oligo	AATGACTCCTGCGGCTTCTTCGTATTGGGTTCAAGA	1 Standard Desalting
p1828, LAMP.168-BIP umole DNA Oligo	TCAAAGACGTCGTCTGGTTGTATCATTACGTCTCCACC	1 Standard Desalting
p1842, LAMP.168-LB Standard Desalting	GCTTTTAAAAACGACGTGT	250 nmole DNA Oligo
p1857, LAMP.168-LF Desalting	TTCACGCCAACACAAGT	250 nmole DNA Oligo Standard

Code	Scale
25nm	25 nmole
100nm	100 nmole
250nm	250 nmole
1um	1 μmole
2um	2 umole
5um	5 μmole
10um	10 μmole
4nmU	4 nmole Ultramer™
20nmU	20 nmole Ultramer™
PU	PAGE Ultramer™
25nmS	25 nmole Sameday

Code	Purification
STD	Standard Desalting
PAGE	PAGE \$60.00
HPLC	HPLC \$42.00
IEHPLC	IE HPLC \$45.00
RNASE	RNase Free HPLC \$75.00
DUALHPLC	Dual HPLC \$80.00
PAGEHPLC	Dual PAGE & HPLC \$130.00

Entries: 6

UPDATE

This message will appear after select “Update”. This is OK.

An invalid scale code was used. The default will be used.

An invalid purification code was used. The default will be used.

STEP 7

✓ Close out of the “Bulk Input” Form.

Behind this form, you will see that the primer information from the Excel file has populated the entry

Oligo Entry

Select All ACTIONS: # of Items: 6 GO BULK INPUT

1 p1825, LAMP.168-F3

Scale: 25 nmole DNA oligo

Formulation: None

Purification: Standard Desalting

Services: No services are available on this scale

Sequence: 5' MOD INTERNAL 3' MOD BASES
GAATCGTTTGAATCGTAAGAGA

Bases: 22 (Min:15 Max:60) Min Yield: 12 nmoles

GC: 36.4% Tm: 51°C DeltaG: -38.14 kcal/mole

2 p1826, LAMP.168-B3

Scale: 25 nmole DNA oligo

Formulation: None

Purification: Standard Desalting

Services: No services are available on this scale

Sequence: 5' MOD INTERNAL 3' MOD BASES
CAGACAAATAAATACGATTCCTTTC

Bases: 25 (Min:15 Max:60) Min Yield: 12 nmoles

GC: 32% Tm: 50.4°C DeltaG: -42.73 kcal/mole

STEP 8

✓ Using the drop down list, change the scale for each of the primers according to the Excel spreadsheet

Below is an example of how to change the scale for Primer #1

Oligo Entry

Select All ACTIONS: ▾ # of Items: 6 GO BULK INPUT 📄

1 p1825, LAMP.168-F3 ✖ ⓘ

Scale ⓘ

- ✓ 25 nmole DNA oligo
- 100 nmole DNA oligo
- 250 nmole DNA oligo**
- 1 μmole DNA oligo
- 2 umole DNA oligo
- 5 μmole DNA oligo
- 10 μmole DNA oligo
- 4 nmole Ultramer™ DNA Oligo
- 20 nmole Ultramer™ DNA Oligo
- PAGE Ultramer™ DNA Oligo
- 25 nmole Sameday

Formulation

None

Purification

Standard Desalting

Services

No services are available on this scale

✓ The scales are changed for Primers 1 through 3

1 p1825, LAMP.168-F3 ✖ ⓘ

Scale ⓘ

250 nmole DNA oligo

Sequence ✖ (5' → 3')

5' MOD ▾ INTERNAL ▾ 3' MOD ▾ BASES ▾

GAATCGTTTGAATCGTAAGAGA

Bases: 22 (Min:5 Max:100) Min Yield: 60 nmoles

GC: 36.4% Tm: 50.2°C DeltaG: -38.14 kcal/mole

Formulation

None

Purification

Standard Desalting

Services

Analytical RP-HPLC \$55.00

Analytical IE-HPLC pH 12.0 \$55.00

\$75.00

2 p1826, LAMP.168-B3 ✖ ⓘ

Scale ⓘ

250 nmole DNA oligo

Sequence ✖ (5' → 3')

5' MOD ▾ INTERNAL ▾ 3' MOD ▾ BASES ▾

CAGACAAATAAATACGATTCCTTTC

Bases: 25 (Min:5 Max:100) Min Yield: 60 nmoles

GC: 32% Tm: 50.4°C DeltaG: -42.73 kcal/mole

Formulation

None

Purification

Standard Desalting

Services

Analytical RP-HPLC \$55.00

Analytical IE-HPLC pH 12.0 \$55.00

\$75.00

3 p1827, LAMP.168-FIP ✖ ⓘ

Scale ⓘ

1 μmole DNA oligo

Sequence ✖ (5' → 3')

5' MOD ▾ INTERNAL ▾ 3' MOD ▾ BASES ▾

AATGACTCCTGCGGCTTCTTTCGTATTTGGGTTCGAA
GA

Bases: 40 (Min:5 Max:100) Min Yield: 200 nmoles

GC: 45% Tm: 66°C DeltaG: -79.7 kcal/mole

Formulation

None

Purification

Standard Desalting

Services

Analytical RP-HPLC \$55.00

Analytical IE-HPLC pH 8.5 \$45.00

Analytical IE-HPLC pH 12.0 \$55.00

Na+ Salt Exchange \$75.00

✓ The scales are changed for Primers 4 through 6

4 p1828, LAMP:168-BIP

Scale 1 μmole DNA oligo

Sequence (5' → 3')

5' MOD INTERNAL 3' MOD BASES

TCAAAGACGTCGCTGTTGGTTCATCATTACGTCTCCA
CC

Bases: 40 (Min:5 Max:100) Min Yield: 200 nmoles
GC: 50% Tm: 66.7°C DeltaG: -74.65 kcal/mole

Formulation None

Purification Standard Desalting

Services

- Analytical RP-HPLC \$55.00
- Analytical IE-HPLC pH 8.5 \$45.00
- Analytical IE-HPLC pH 12.0 \$55.00
- Na+ Salt Exchange \$75.00

5 p1842, LAMP:168-LB

Scale 250 nmole DNA oligo

Sequence (5' → 3')

5' MOD INTERNAL 3' MOD BASES

GCTTTTAAAAACGACGTGT

Bases: 19 (Min:5 Max:100) Min Yield: 60 nmoles
GC: 36.8% Tm: 49.2°C DeltaG: -35.43 kcal/mole

Formulation None

Purification Standard Desalting

Services

- Analytical RP-HPLC \$55.00
- Analytical IE-HPLC pH 12.0 \$55.00
- \$75.00

6 p1857, LAMP:168-LF

Scale 250 nmole DNA oligo

Sequence (5' → 3')

5' MOD INTERNAL 3' MOD BASES

TTCACGCCAACAACAAGT

Bases: 18 (Min:5 Max:100) Min Yield: 60 nmoles
GC: 44.4% Tm: 52.6°C DeltaG: -33.95 kcal/mole

Formulation None

Purification Standard Desalting

Services

- Analytical RP-HPLC \$55.00
- Analytical IE-HPLC pH 12.0 \$55.00
- \$75.00

STEP 9

✓ Once all of the scales have been updated on the primers, add them to the Shopping Cart and Check Out

Shopping Cart Web Order #21589374

Current Order as of 2021/06/28 03:43:57 PM (CDT)

Please click here to give us your feedback on your ordering experience.

Select All

DELETE SELECTED

# 1 p1825, LAMP:168-F3		ACTIONS	qty	1	GO	\$26.40
Product	250 nmole DNA oligo	Expected Ship Date	6/29/2021			
Purification	Standard Desalting	Guaranteed Yield	13.8 ODs = 60 nmol = 409.3 μgrams			
Length	22					
Sequence	GAA TCG TTT GAA TCG TAA GAG A					

# 2 p1826, LAMP:168-B3		ACTIONS	qty	1	GO	\$30.00
Product	250 nmole DNA oligo	Expected Ship Date	6/29/2021			
Purification	Standard Desalting	Guaranteed Yield	14.9 ODs = 60 nmol = 455.6 μgrams			

CHECK OUT

ADD TO WISH LIST

E-MAIL CART / QUOTE

CONTINUE SHOPPING

Promo Code

APPLY

Order Summary

Subtotal	\$296.80 USD
S&H	TBD
Tax	TBD
Total	TBD

STEP 10

The Primers will be sent to you in a powder form and need to be resuspended by a lab.

Below is the protocol to be followed by the lab:

The LAMP primers from Integrated DNA Technologies need to be re-suspended in a buffer ('TE', 10mM Tris pH 8.0, 1.0 mM EDTA) to a concentration of 1mM. The 1mM oligonucleotides then need to be diluted in water to their respective concentrations to make up the LAMP primer stock. Aliquots of 12.5 μ l (micro liter) will be needed.

LAMP Set I			Final Concentration (μ M)	10X LAMP primer mix			
				Volume (μ l) of 1 mM stock To make 200 μ l	Volume (μ l) of 1 mM stock To make 200 μ l	Volume (μ l) of 1 mM stock To make 1000 μ l	Volume (μ l) of 1 mM stock To make 5000 μ l
p1825	LAMP.168-F3	GAATCGTTTGAATCGTAAGAGA	0.2	0.4	1	2	10
p1826	LAMP.168-B3	CAGACAAATAAATACGATTCCTTTC	0.2	0.4	1	2	10
p1827	LAMP.168-FIP	AATGACTCCTGCGGCTTCTTCGTATTTTGGGTTCGAAGA	1.6	3.2	8	16	80
p1828	LAMP.168-BIP	TCAAAGACGTGCTGTGGTTGTCATCATTACGTCCTCCACC	1.6	3.2	8	16	80
p1842	LAMP.168-LB	GCTTTTAAAAACGACGTGT	0.4	0.8	2	4	20
p1857	LAMP.168-LF	TTCACGCCAACAACAAGT	0.4	0.8	2	4	20
			Total	8.8	22	44	220
			Water to 200 μ l	191.2			
			Water to 500 μ l		478		
			Water to 1000 μ l			956	
			Water to 5000 μ l				4780