Humanizing Genomics
macrogen
EUROPE

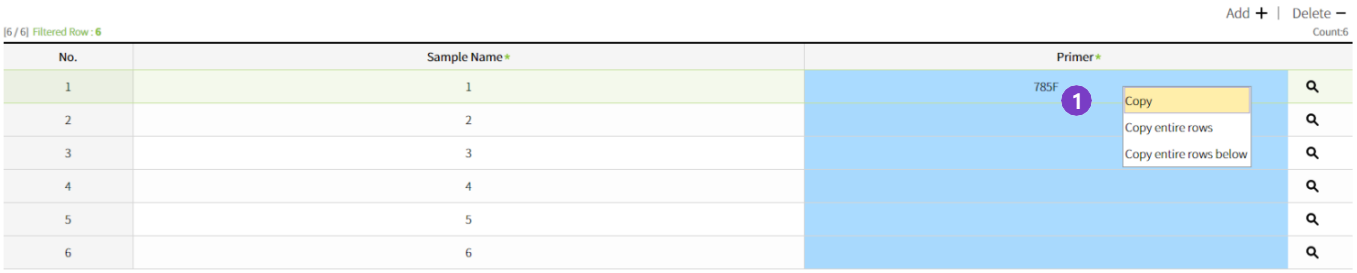
User Guide

Sanger Sequencing

- Standard Sequencing
- 1 primer/1 plate
- Multiple primer/1 plate

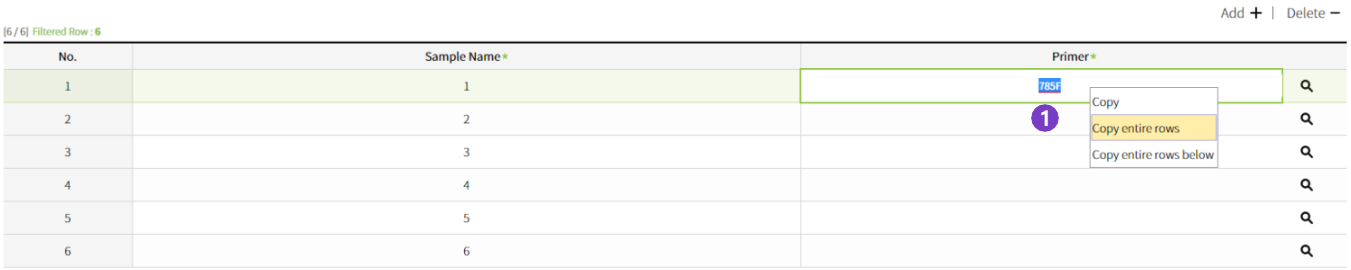
Ver_4.0

How to Use the “Copy” Function



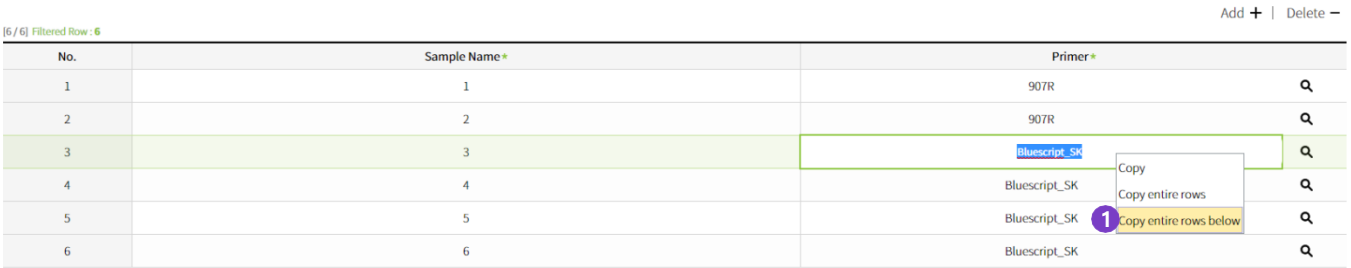
① **Copy**

- **When:** You want to fill specific (selected) **rows with a single value**
- **How:** Select the rows you want to fill with a single value. One row must already contain the value you want to copy. Right-click and select “Copy”. The value will fill the selected rows.



① **Copy Entire Rows**

- **When:** You want to fill **entire rows with a single value.**
- **How:** Select the row containing the value you want to copy, right-click and select “Copy Entire Rows”. The value will fill the entire rows.



① **Copia Entire Rows Below**

- **When:** You want to fill **specific rows (from the selected row to the end) with a single value**.
- **How:** Select the row containing the value you want to copy, right-click and select “Copy Entire Rows Below”. The value will fill the rows below.

Sample and Primer Preparation

Please follow the recommended values to obtain high-quality results. Samples and primers must be prepared separately.

Sample Preparation

Sample and Primer Preperation Guide (for 1 reaction)

Template / Service		Sample Quantity		Primer Quantity
PCR product Purified/ Unpurified	< 200 bp	3 ~ 5 ng/ul	Minimum 10ul +5ul per reaction	Minimum 10ul +5ul per reaction * 5 ~ 10pmole/ul Primer TM : 50 ~ 58°C
	200 ~ 600 bp	5 ~ 10 ng/ul		
	600 ~ 1000 bp	10 ~ 20 ng/ul		
	> 1000 bp	20 ~ 50 ng/ul		
Plasmid		100 ~ 150 ng/ul		
Gel extraction		50 ~ 100 ng/ul	> 30 ul	

* if your samples do not meet the recommended concentration, we cannot guarantee high-quality results

Primer Preparation

-Concentration:

5~10 pmole/μL (=60 ng/μL) in deionized water.

-Volume:

At least 2 μL per reaction NOT per sample. (for example. For 20 reactions, 40 μL)

- High purity
- Correct Concentration
- No secondary priming sites
- No mismatches
- Length 18-25 bases.
- GC% between 40% and 60%.
- Tm (melting temperature) between 55°C and 60°C
- No significant hairpins (>3bp)
- Free of salts, EDTA, or other contaminant

Please provide primers at a concentration of 10 pmole/μl =60 ng/μl in deionized water with a volume greater than 20 μl.

Customer-supplied primers must be desalted or purified. Universal primers are available free of charge. Please refer to the universal primer list on pages 29–30.

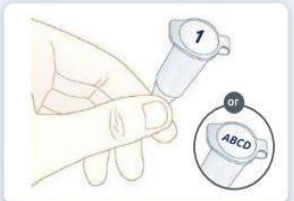
For Tubes

- Use 1.5 mL microcentrifuge tubes. Do not use 0.2 mL PCR tubes. Please write the sample number on the lid of each tube.
- In the "Reaction Information" section, name samples as S_# (S for sample name and # for sample number), or alternatively write the sample name directly on the tube. If more than one primer is added to the same sample, keep the same sample name and change only the primer name in "Reaction Information". In this case, only one tube containing the sample is required

For Plates

- Strip-capped and out-skirted plates are strongly recommended to prevent sample leakage.
- Samples must be loaded vertically (A1–B1, etc.). Fill all wells corresponding to the required reactions and name them using the sample name (S) and sample number (#): S_#.
- Empty wells should be named Empty_# (Sample number).
- Please wrap plates with bubble wrap.

Reaction Information



Sample Tube
(One tube for two or more reactions)


out-skirted well


strip-capped well

Plates Layout

Standard-seq 1 primer/1 plate

	1	2	3	4	5	6	7	8	9	10	11	12	
A	S_1	S_9	S_17	S_25	S_33	S_41	S_49	S_57	S_65	S_73	S_81	S_89	A
B	S_2	S_10	S_18	S_26	S_34	S_42	S_50	S_58	S_66	S_74	S_82	S_90	B
C	S_3	S_11	S_19	S_27	S_35	S_43	S_51	S_59	S_67	S_75	S_83	S_91	C
D	S_4	S_12	S_20	S_28	S_36	S_44	S_52	S_60	S_68	S_76	S_84	S_92	D
E	S_5	S_13	S_21	S_29	S_37	S_45	S_53	S_61	S_69	S_77	S_85	S_93	E
F	S_6	S_14	S_22	S_30	S_38	S_46	S_54	S_62	S_70	S_78	S_86	S_94	F
G	S_7	S_15	S_23	S_31	S_39	S_47	S_55	S_63	S_71	S_79	S_87	S_95	G
H	S_8	S_16	S_24	S_32	S_40	S_48	S_56	S_64	S_72	S_80	S_88	S_96	H
	1	2	3	4	5	6	7	8	9	10	11	12	

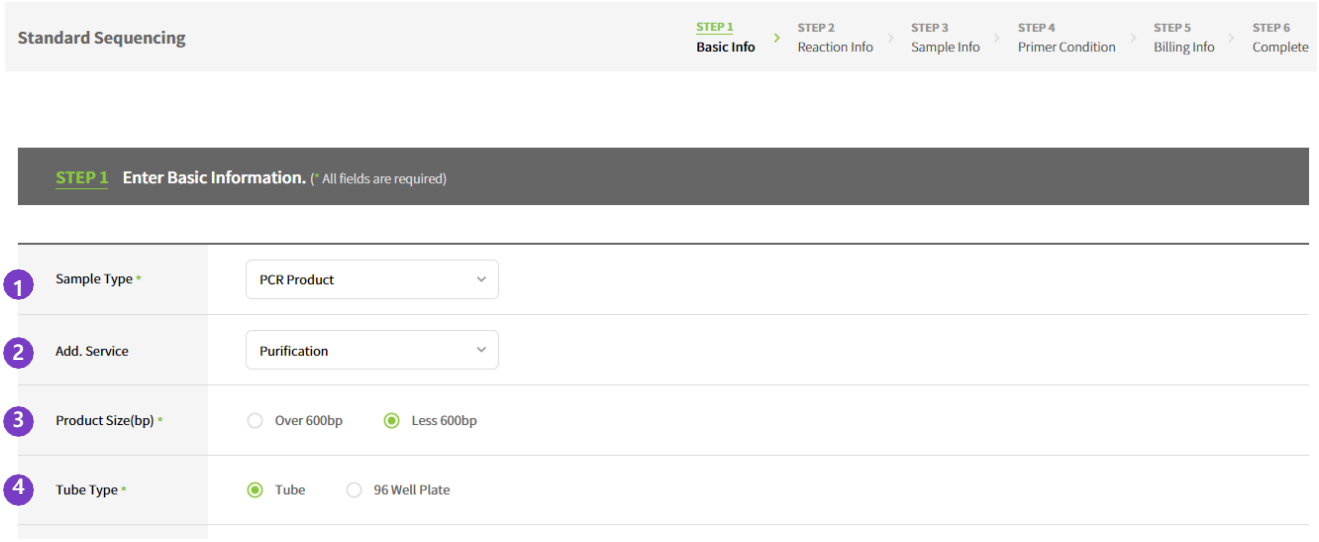
Standard-seq 1 primer/1 plate

Standard-seq Multi primer (Max6)

	1	2	3	4	5	6	7	8	9	10	11	12	
A	S_1	S_9	S_17	S_25	S_33	S_41	S_49	S_57	S_65	S_73	S_81	S_89	A
B	S_2	S_10	S_18	S_26	S_34	S_42	S_50	S_58	S_66	S_74	S_82	S_90	B
C	S_3	S_11	S_19	S_27	S_35	S_43	S_51	S_59	S_67	S_75	S_83	S_91	C
D	S_4	S_12	S_20	S_28	S_36	S_44	S_52	S_60	S_68	S_76	S_84	S_92	D
E	S_5	S_13	S_21	S_29	S_37	S_45	S_53	S_61	S_69	S_77	S_85	S_93	E
F	S_6	S_14	S_22	S_30	S_38	S_46	S_54	S_62	S_70	S_78	S_86	S_94	F
G	S_7	S_15	S_23	S_31	S_39	S_47	S_55	S_63	S_71	S_79	S_87	S_95	G
H	S_8	S_16	S_24	S_32	S_40	S_48	S_56	S_64	S_72	S_80	S_88	S_96	H
	1	2	3	4	5	6	7	8	9	10	11	12	

Standard-seq Multiple primer (Max 6)

Standard Sequencing



① **Sample Type:** Select the sample type from the options:

- **Plasmid**
- **PCR Product**
- **Premix**: place plasmid or PCR product together with primer in one tube

② **Additional Service Required:** Select an additional service if needed.

- **Purification**: Purification applies to unpurified PCR products.

③ **Product Size (bp):** Select the size of your product. This affects the experimental settings.

④ **Tube Type:** Select the tube type if samples are placed in tubes or 96-well plates.

To place an order, please visit https://order.macrogen-europe.com/main.do.

After logging in with your credentials, follow these steps:

- **Ordering**
- **Standard sequecing**
- Select the **required service**

If you do not have an account, you can create one by clicking **"Sign up"** on the website.

Data Entry Modes

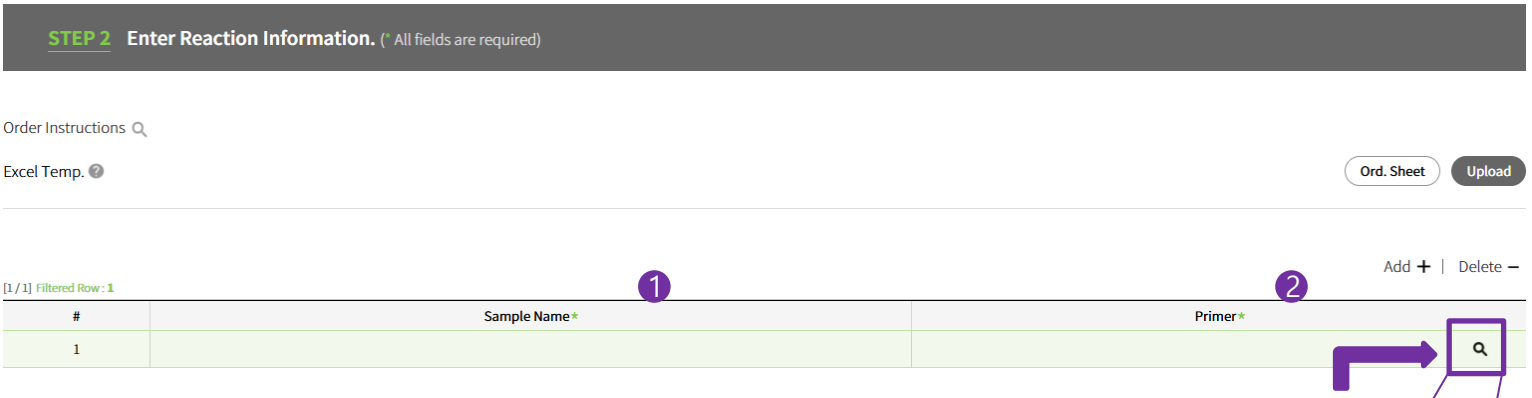
You can enter sequencing information in two ways: **step-by-step via the website** (Option 1), or by **downloading and uploading a pre-filled Excel file** (Option 2).

Option 1: Fill in the Information on the Website

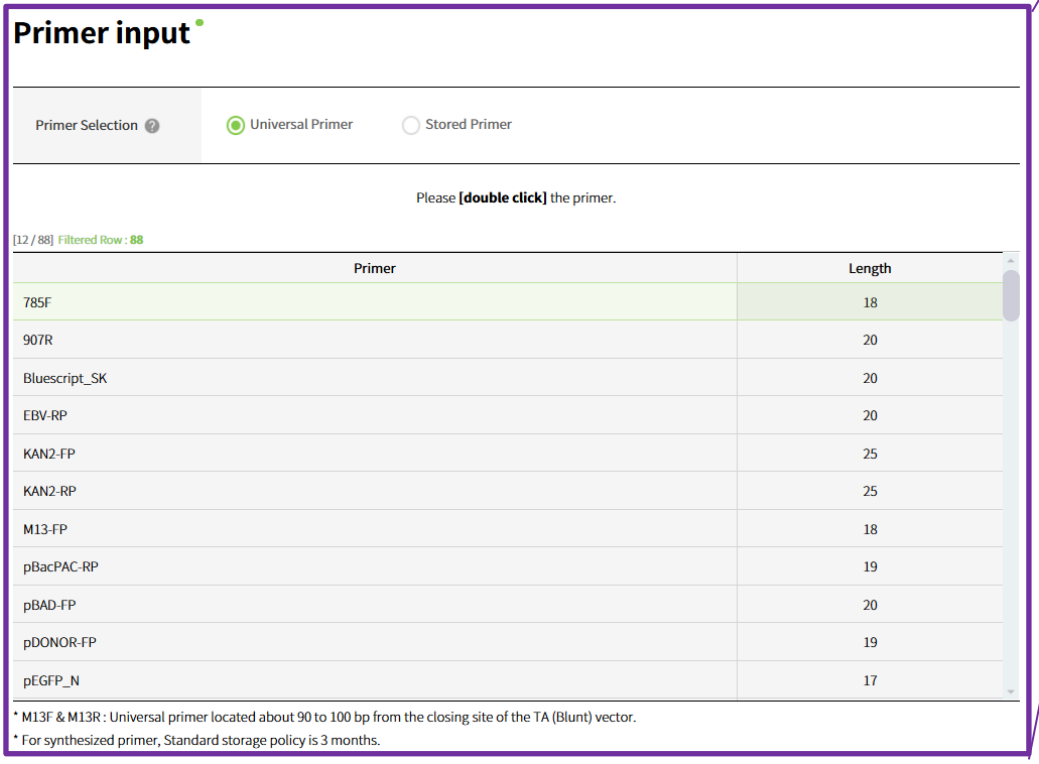
With this method, sample information is entered step-by-step on the website.

① **Sample name:** indicate the name of the sample

② **Primer:** indicate the name of the primer



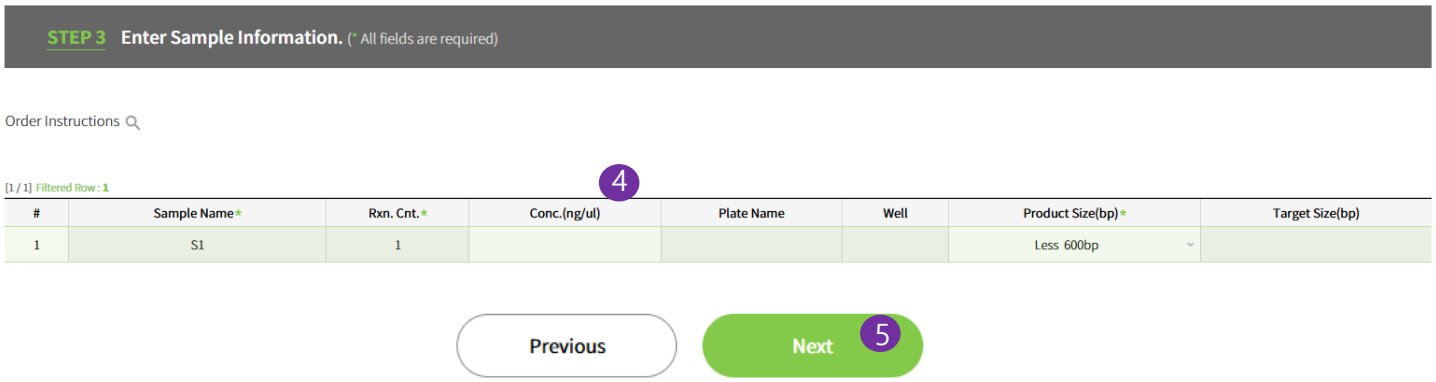
Universal/Stored Primers: Universal or stored primers can be selected by clicking the button. The complete list is available on **pages 29–30**.

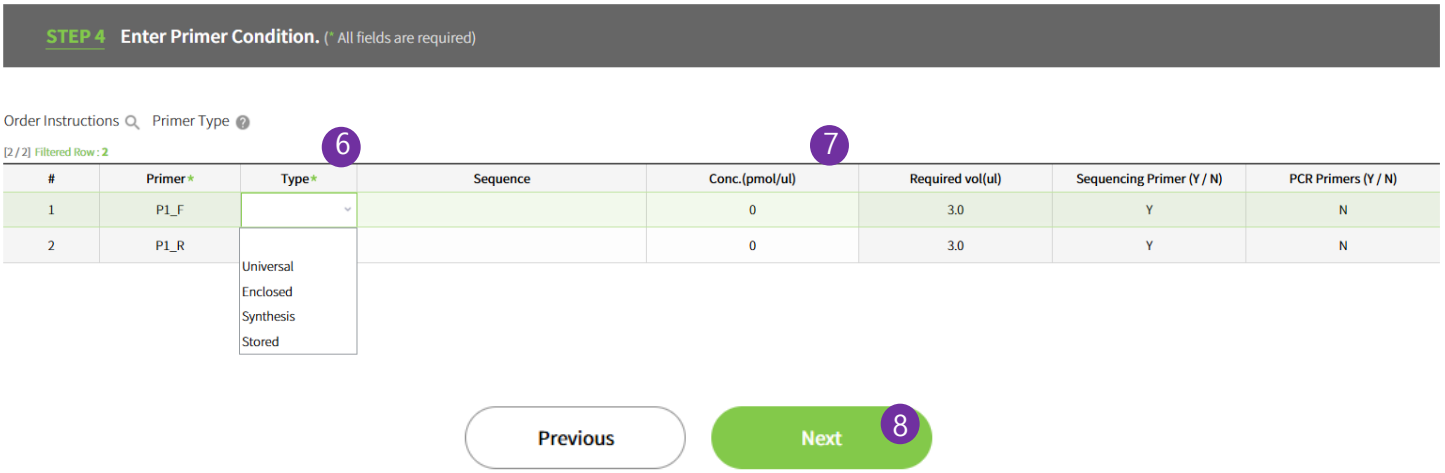


③ **Next:** click "Next" to proceed to the next section

④ **Concentration:** Enter the sample concentration

⑤ **Next:** click on "Next" to proceed to the next section





⑥ **Select the primer type:**

- **Universal:** Universal primers available at Macrogen
- **Enclosed:** Primers sent with the samples. Concentration must be specified.
- **Synthesis:** If you need us to synthetize your primers

If you choose to synthetize the primers, it will require 3-4 additional working days. Keep track of the shipping times and be sure to choose the Regular Standard Sequencing Option when placing the order.

- **Stored:** Primers used in previous orders. The name must match exactly

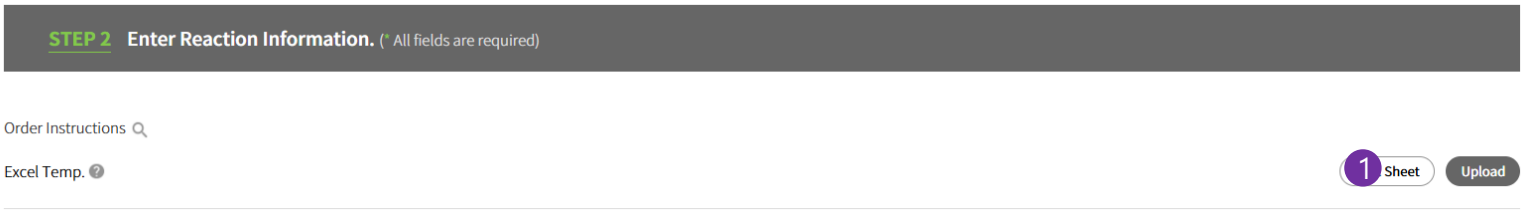
⑦ **Primer concentration must be entered only for included primers.**

⑧ **Next**

Option 2: Use of the Excel File (Recommended for Bulk Reactions)

With this method, all order information (reaction information, sample information, and primer information) can be entered using a single Excel file.

① **Excel download:** Download the Excel file.



② **Insert the data:** Fill in the required information:

- Sample name.
- Primer name.
- Sample Concentration (ng/ul).
- Plate name (only for 1 primer/ 1 plate o multi-primer/ 1 plate).
- Well position (only for 1 primer/ 1 plate o multi-primer/ 1 plate).
- Product size (bp).
- Target size (bp).
- Primer Sequence (5′ to 3′).
- Primer Concentration (pmol/ul).

2

※ Only English Alphabet (either capital small letters), digit 0~9, a hypen (-) or under bar (_) is allowed.

#	Reaction Information		Sample Information					Primer Information	
	Sample Name *	Primer Name *	Sample Concentration (ng/ul)	Plate Name	Well Position	Product Size(bp)	Target Size(bp)	Primer Sequence(5 to 3)	Primer Concentration (pmol/ul)
1									
2									
3									
4									
5									
6									

③ **Excel Upload:** Upload it directly into the system

Bidirectional sequencing

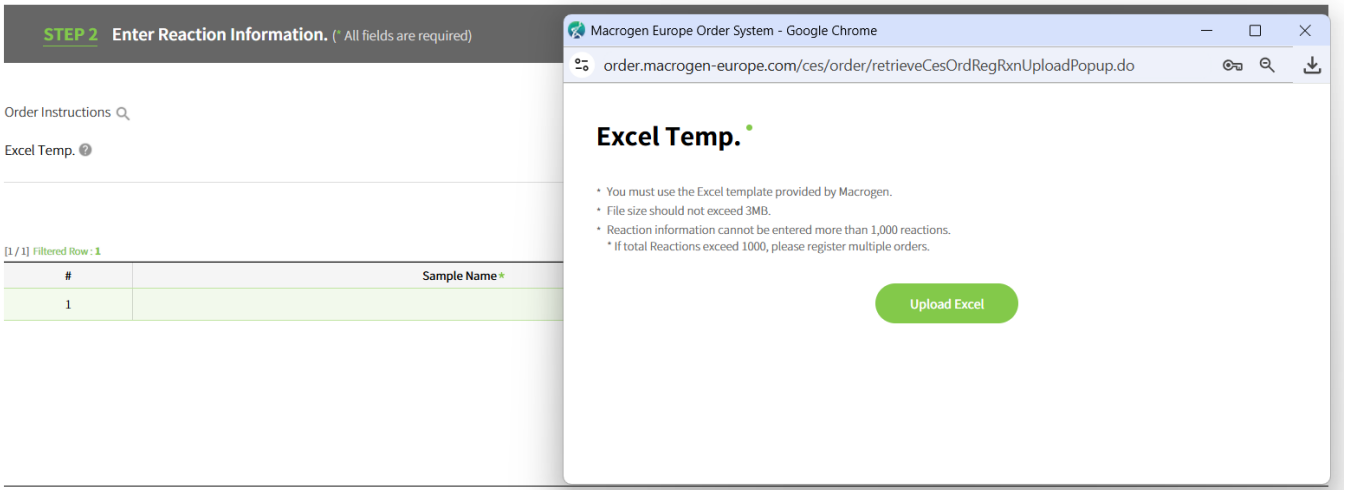
#	Reaction Information	
	Sample Name *	Primer Name *
1	A	1_F
2	A	1_R
3	B	2_F
4	B	2_R

Unidirectional sequencing

#	Reaction Information	
	Sample Name *	Primer Name *
1	A	1_F
2	B	2_F
3	C	3_F
6	D	4_F

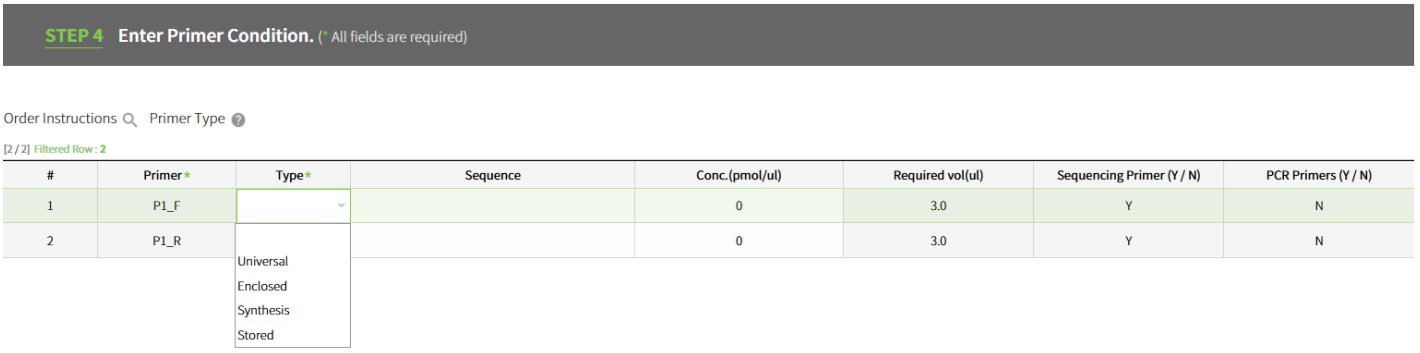
Bidirectional sequencing: Enter the sample name twice and one primer set (forward and reverse).

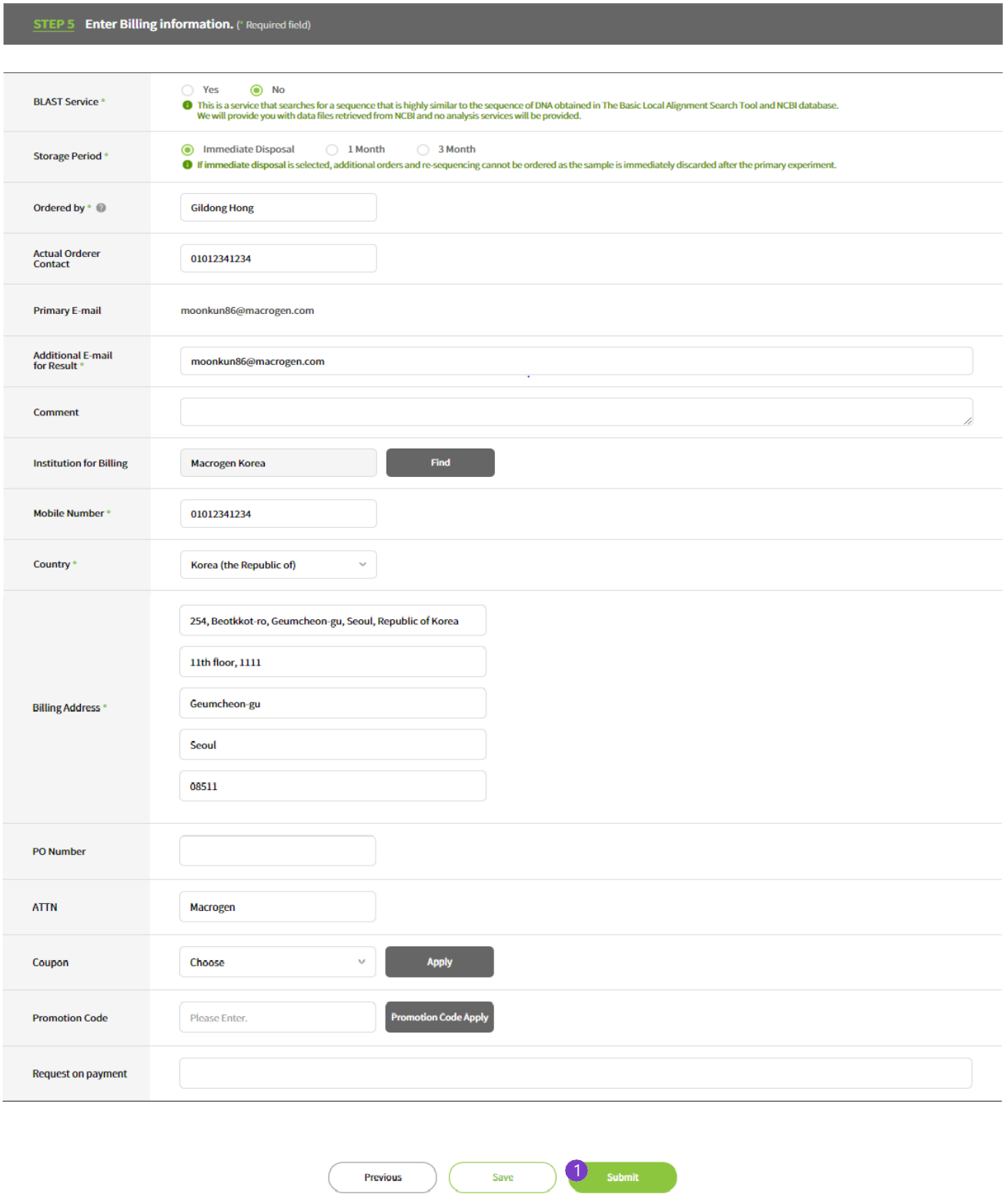
Unidirectional sequencing: Enter the sample name once and the primer name



Once the Excel file is uploaded, all sample information will be **automatically** populated in the relevant steps.

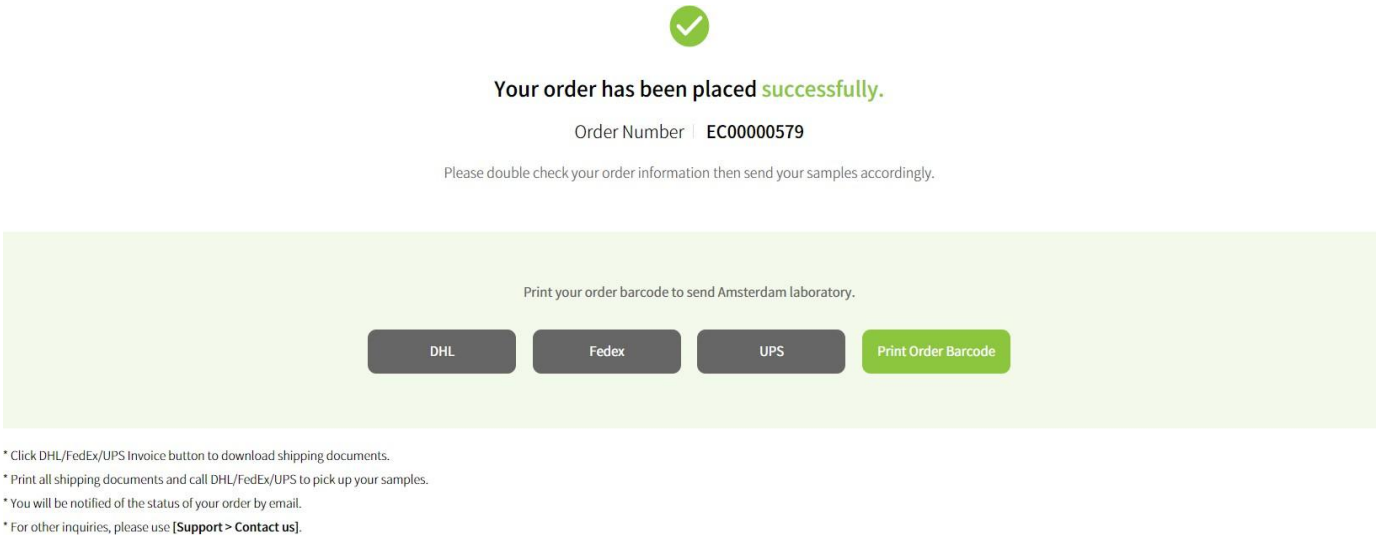
Primer selection: In "Step 4 – Enter Primer Condition", specify the primer type as in Option 1 (Universal, Included, Synthesis, or Stored).



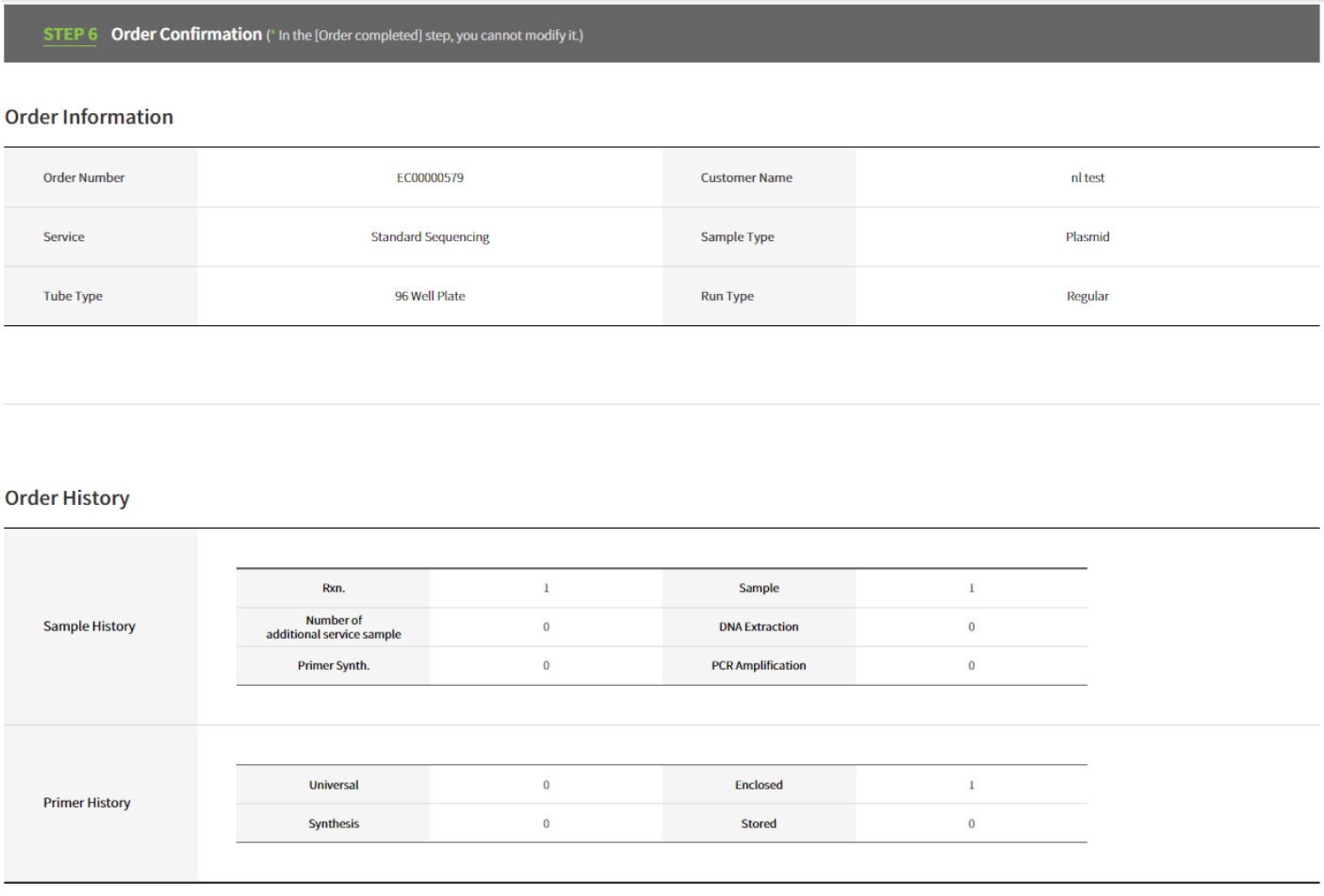


① Enter all billing information, select the **options for BLAST Service** and **Storage Period**, and click **[Submit].**

If “Immediate Disposal” is selected, no further orders or sequencing can be performed, as the sample will be discarded immediately after the main experiment.

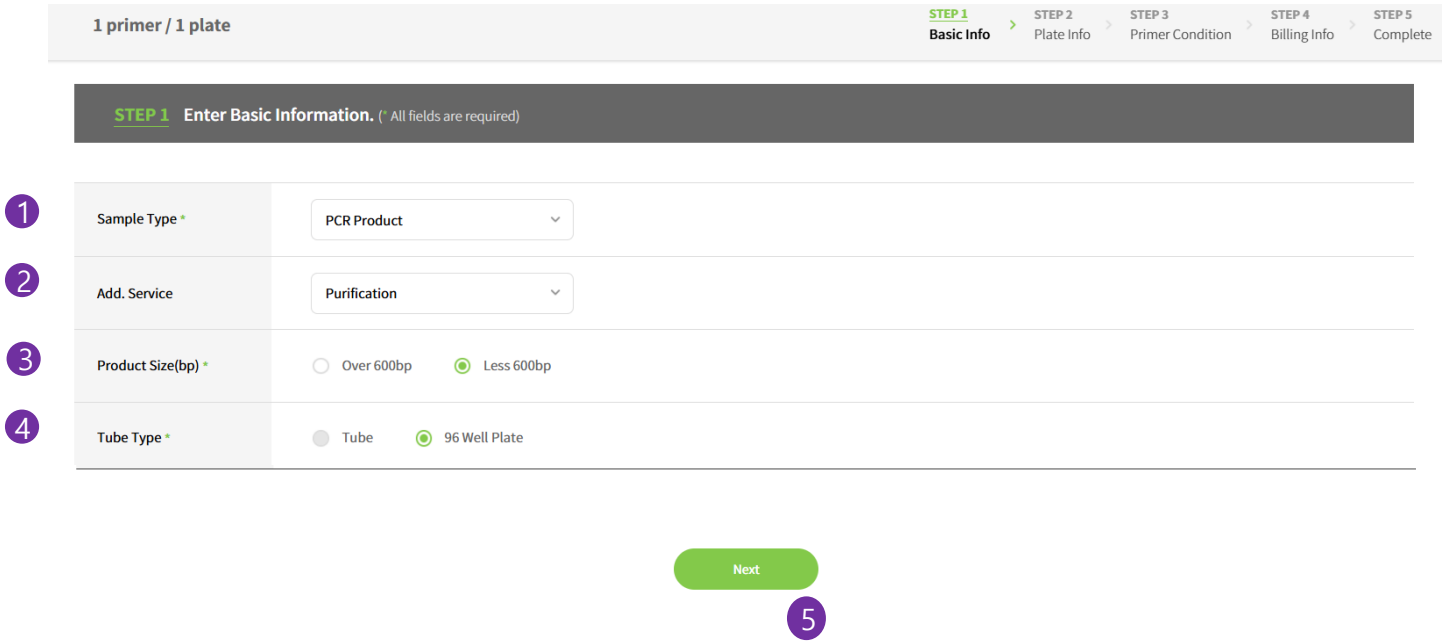


* You can check the order number and obtain your **[DHL/FedEx/UPS commercial invoice]**.
  Please **print the barcode** order and send it together with the samples.



* Finally, you can **review the order information**

1 primer/1 plate



① **Sample Type:** Select the type of sample **(Plasmid/PCR product)**

② **Additional Service:** Select an additional service if needed.

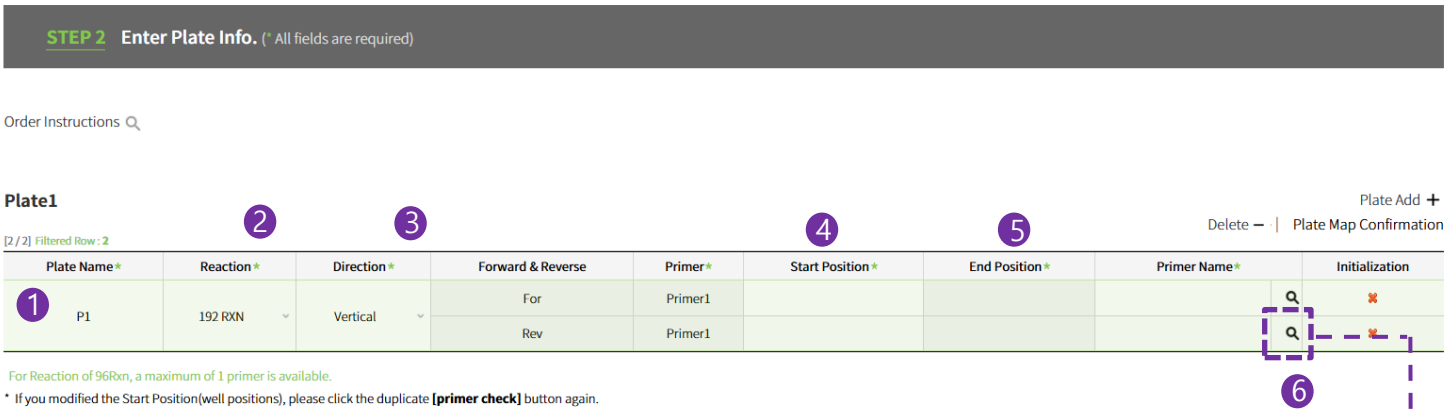
- **Purification**: Purification applies to unpurified PCR products

③ **Product Size (bp):** Select the size of your product. This affects the experimental settings

④ **Type of Tube:** **[96-wells plate]** Selected Automatically

⑤ **Next**

1 primer/1 plate

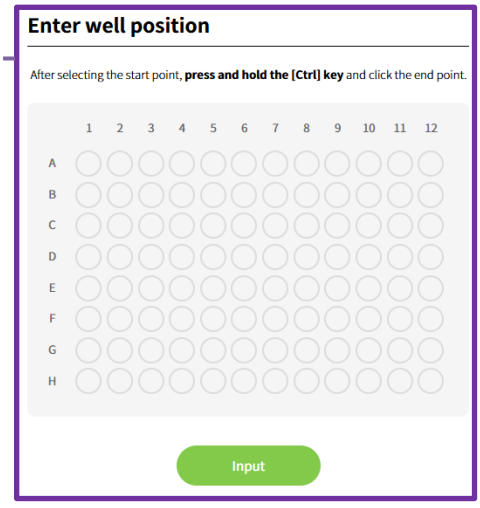


① **Name of the Plate:** Insert the name of the plate

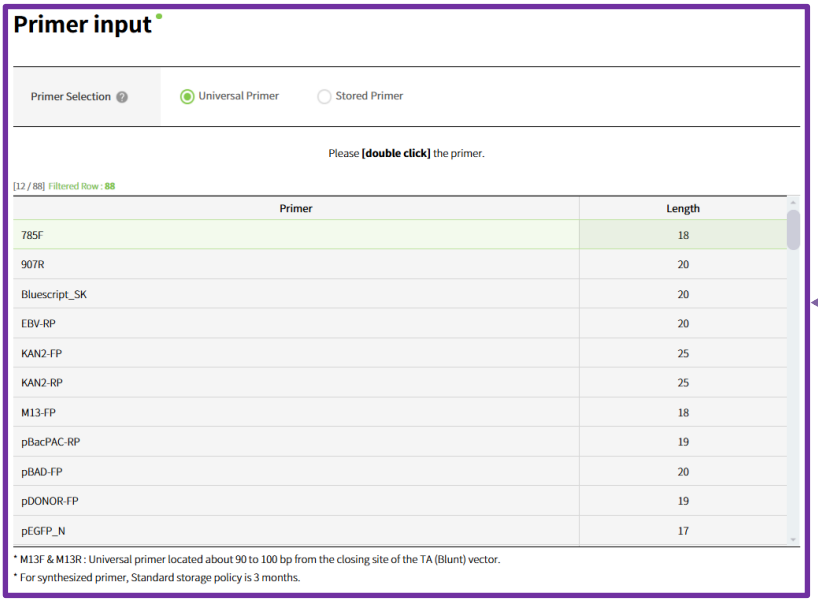
② **Reaction:** Select the number of reactions **[96 Rxn (Unidirectional Sequencing)]** **[192 Rxn (Bidirectional Sequencing)]**

③ **Plate direction:** Choose between **[Horizontal], [Vertical]**

④⑤ **Start-End:** Click on the column **Start position** to visualize the page **[Enter well position]**. Select the initial well (es: A1), press **crtl** and select the final well (es: H12). Once you click on input, starting and ending positions will be filled automatically.



Primer name: Insert the name of the primer. Click on the lens if you need to use our universal primers available at Macrogen (complete list: pages 29-30) o stored primers



1 primer/1 plate

STEP 2 **Enter Plate Info.** (* All fields are required)

Order Instructions

Plate1

Plate Add + | Delete − | Plate Map Confirmation

[2 / 2] Filtered Row : 2

Plate Name*	Reaction*	Direction*	Forward & Reverse	Primer*	Start Position*	End Position*	Primer Name*	Initialization
plate1	192 RXN	Vertical	For	Primer1	A01	H12	P1_F	✖
			Rev	Primer1	A01	H12	P1_R	✖

For Reaction of 96Rxn, a maximum of 1 primer is available.

* If you modified the Start Position(well positions), please click the duplicate **[primer check]** button again.

Confirm plate map: Once you have provided all the details, click on **Plate map confirmation.**

Save & Plate View

Sample Information

[5 / 96] Filtered Row : 96

#	Plate Name	Well	Sample Name*	Conc.(ng/ul)	Product Size(bp)(bp)
1	plate1	A01	plate1_A01	0	Less 600bp
2	plate1	B01	plate1_B01	0	Less 600bp
3	plate1	C01	plate1_C01	0	Less 600bp
4	plate1	D01	plate1_D01	0	Less 600bp
5	plate1	E01	plate1_E01	0	Less 600bp

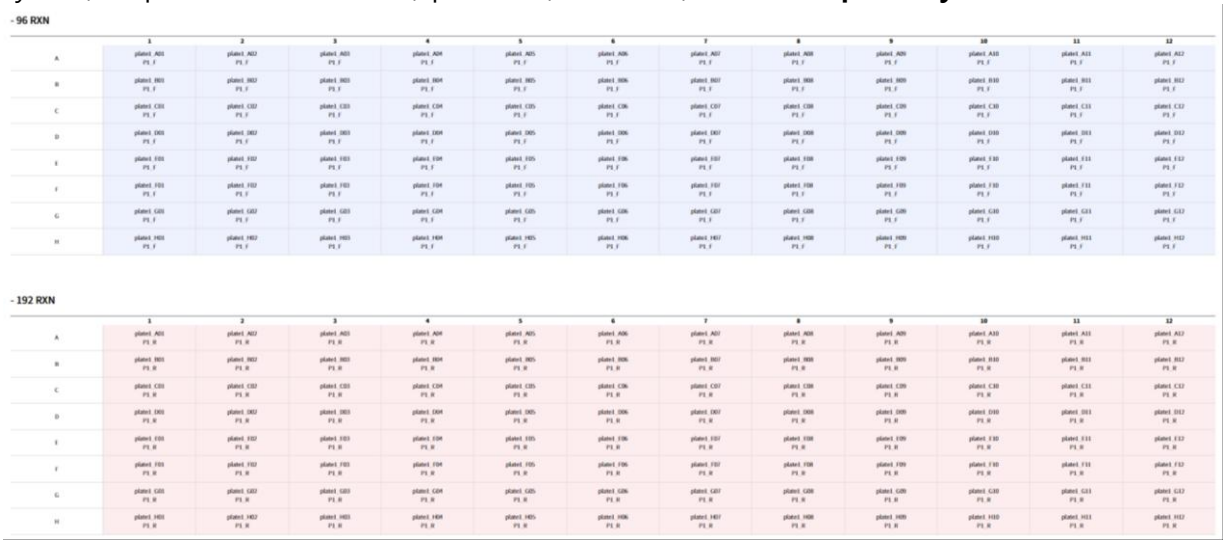
Reaction Information

[10 / 192] Filtered Row : 192

#	Plate Name	Well	Sample Name	Primer
1	plate1	A01	plate1_A01	P1_F
2	plate1	B01	plate1_B01	P1_F
3	plate1	C01	plate1_C01	P1_F
4	plate1	D01	plate1_D01	P1_F
5	plate1	E01	plate1_E01	P1_F
6	plate1	F01	plate1_F01	P1_F
7	plate1	G01	plate1_G01	P1_F
8	plate1	H01	plate1_H01	P1_F
9	plate1	A02	plate1_A02	P1_F
10	plate1	B02	plate1_B02	P1_F

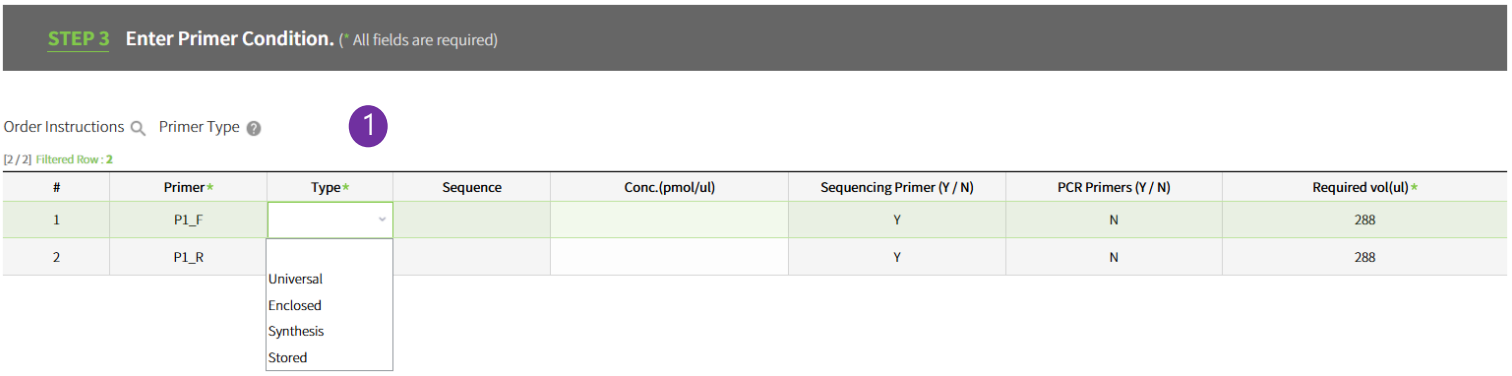
Save & Plate View

Specify the concentration of the primers and click on **Save & Plate View.** You will be able to visualize the plate layout (Sample and Primer name) per well (See below). **Close the plate layout and continue.**



*You do not need to insert the sample names. They will be automatically generated from their corresponding position in the plate.

1 primer/1 plate



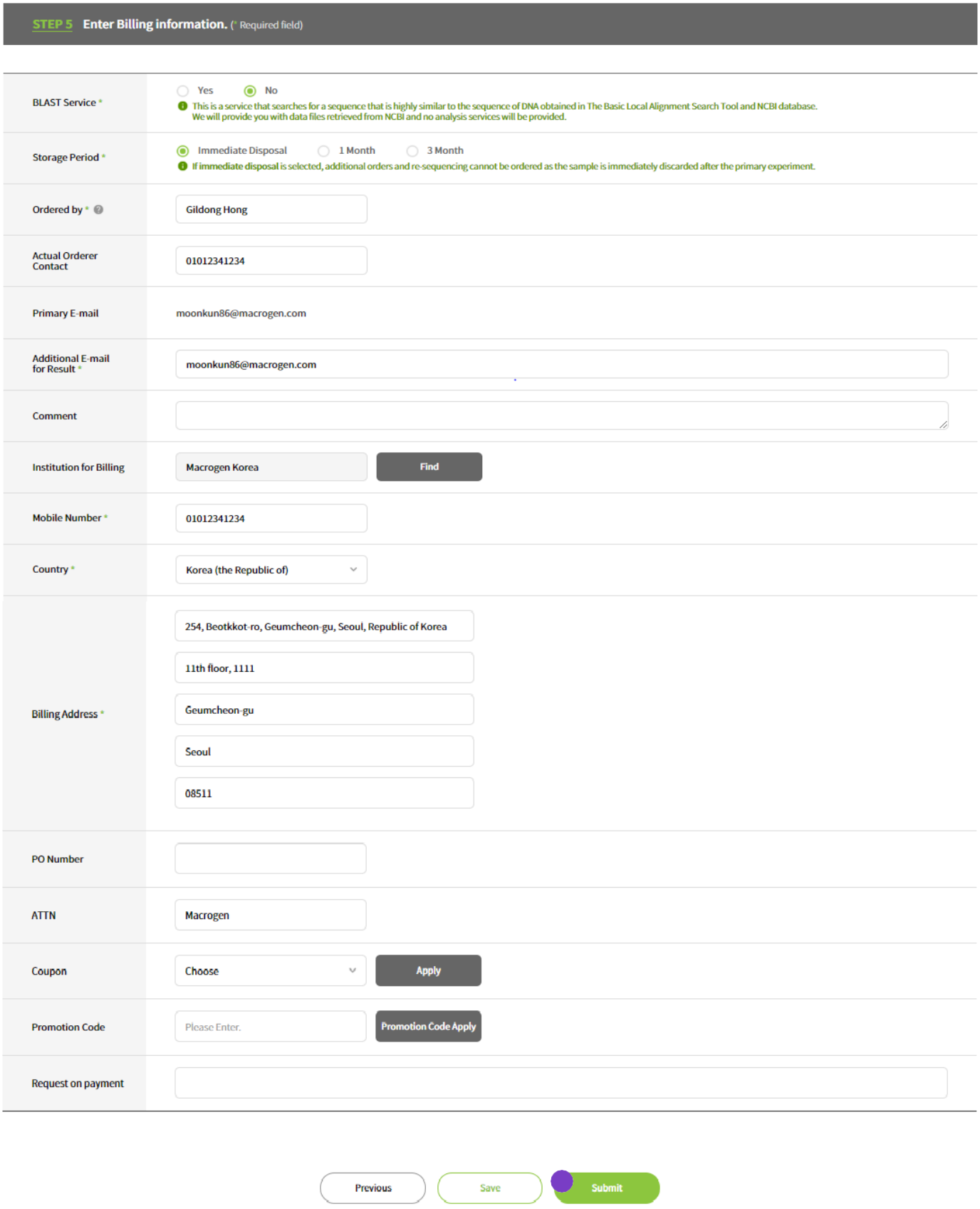
① **Primer type:** Select the primer type. **You can choose only 1.**

- **Universal:** Universal primers available at Macrogen
- **Enclosed:** Primer sent with the samples.
  Concentration must be specified.
- **Synthesis:** If you need us to synthetize your primers

If you choose to synthetize the primers, it will require 3-4 additional working days. Keep track of the shipping times and be sure to choose the Regular Standard Sequencing Option when placing the order.

- **Stored:** Primers used in previous orders.
  The name must match exactly

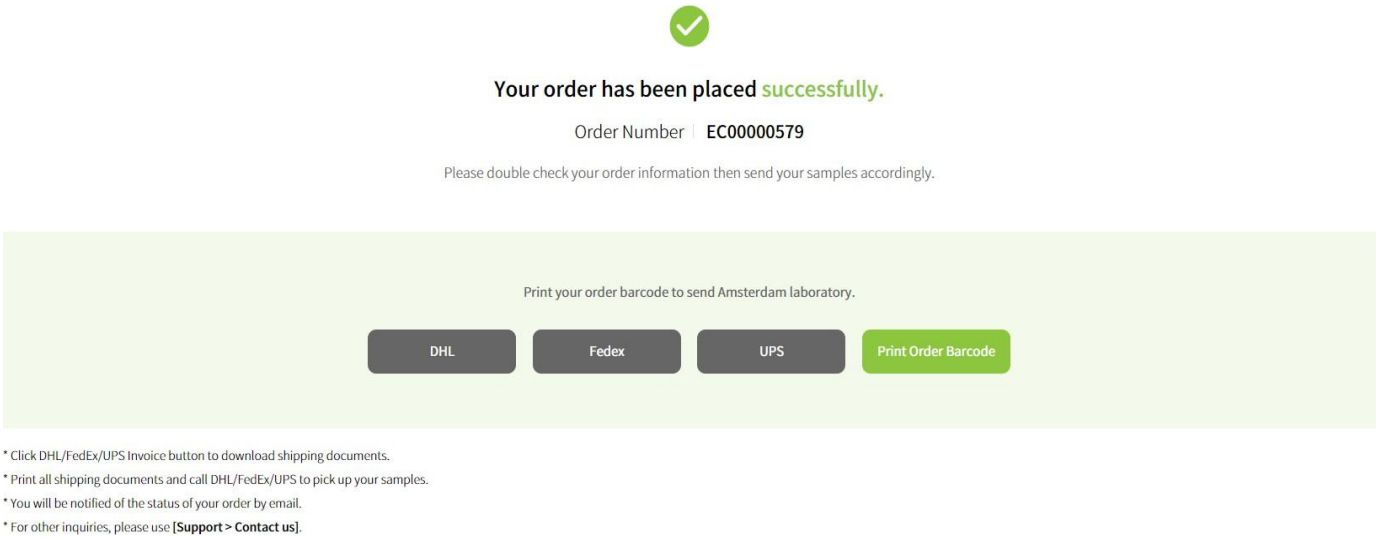
If the plate is not correctly placed, empty wells will be added automatically, and the reaction will be deleted right after the experiment.



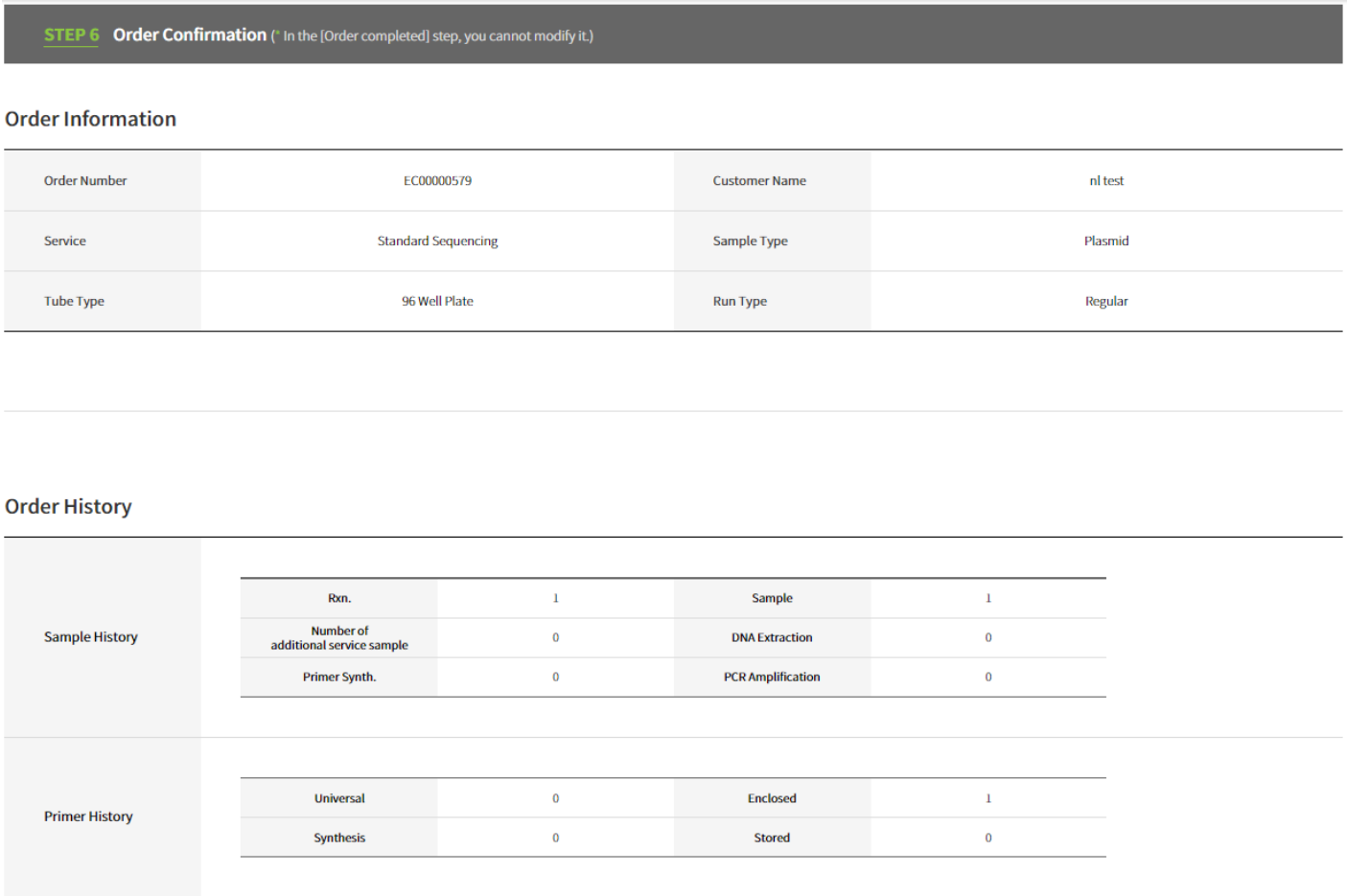
① Enter all billing information, select the **options for BLAST Service** and **Storage Period**, and click **[Submit].**

If “Immediate Disposal” is selected, no further orders or sequencing can be performed, as the sample will be discarded immediately after the main experiment.

1 primer/1 plate



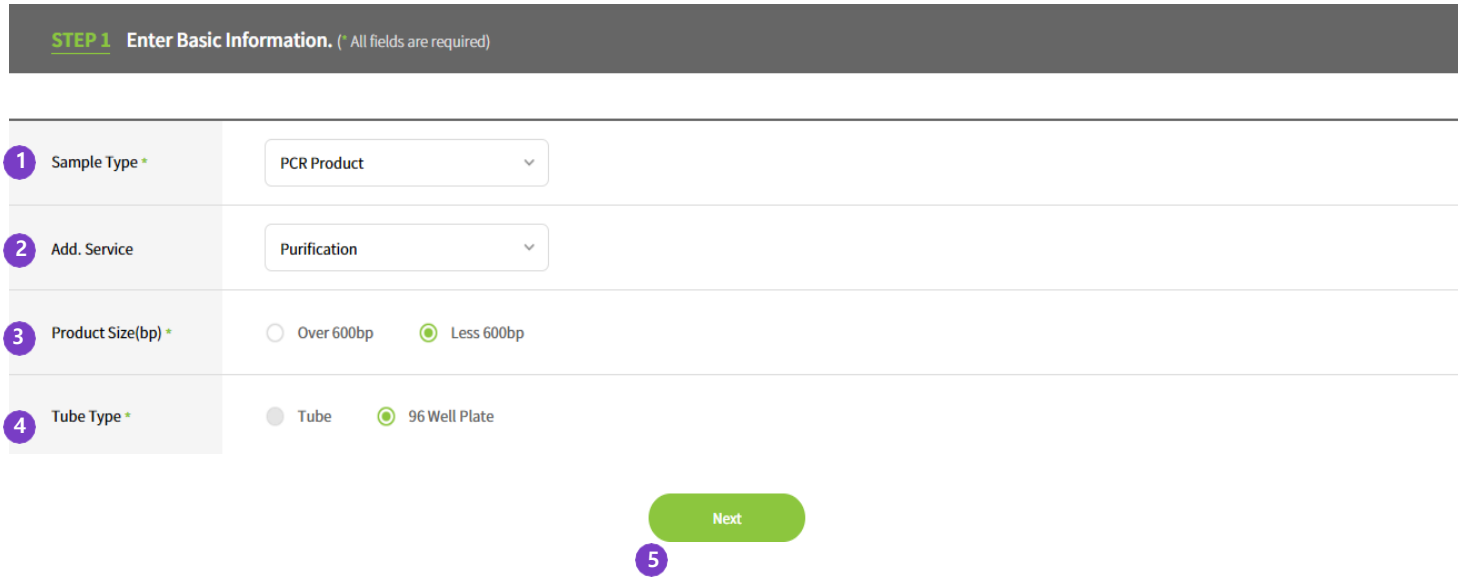
* You can check the order number and obtain your **[DHL/FedEx/UPS commercial invoice]**.
  Please **print the barcode** order and send it together with the samples.



* Finally, you can **review the order information**

If your sample is placed only between A1~H6 or A7~H12, please select the service 1 primer/Half plate.

Multiple primer/1 plate



① **Sample Type:** Select the type of sample **(Plasmid/PCR product)**

② **Additional Service:** Select an additional service if needed.

- **Purification**: Purification applies to unpurified PCR products

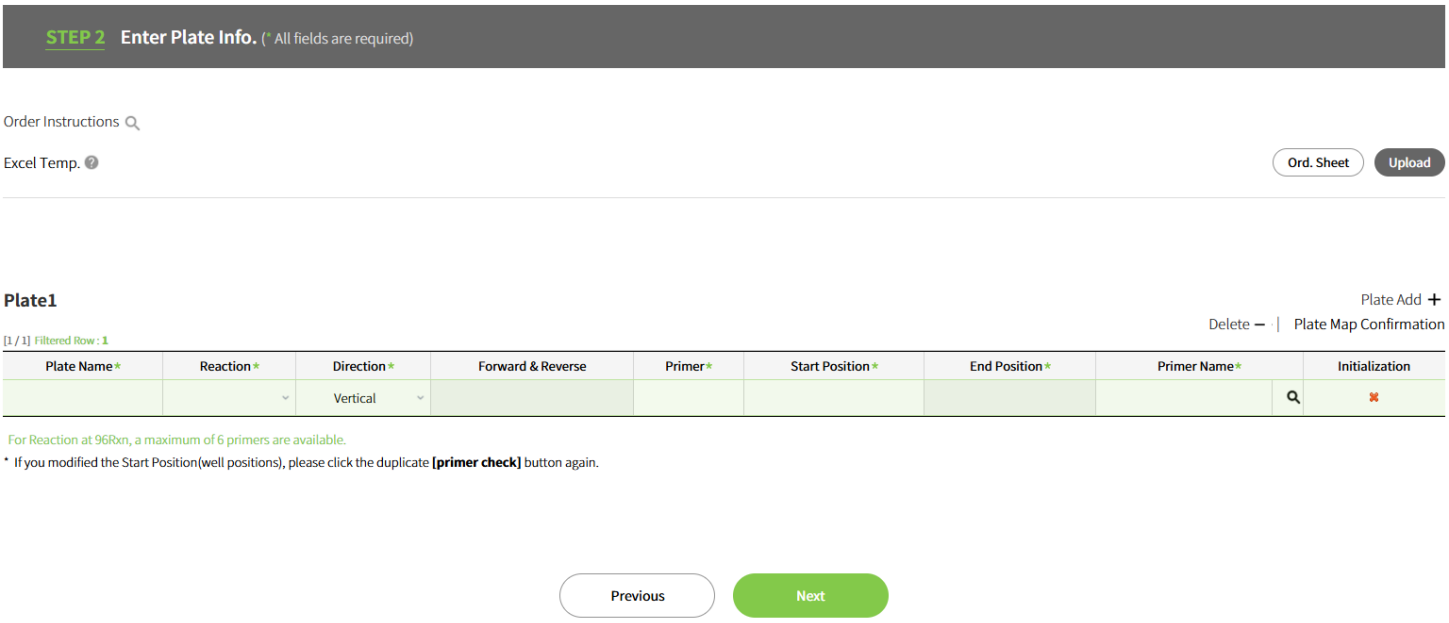
③ **Product Size (bp):** Select the size of your product. This affects the experimental settings.

④ **Type of Tube:** **[96-wells plate]** Selected Automatically.

⑤ **Next**

* You do not need to insert the sample names. They will be automatically generated from their corresponding position in the plate.

Multiple primer/1 plate



① You can place your order for multiple primer /1 plate with two modalities:

1) **Place your order step-by-step on the web page of our website.**
2) **Inserting all the details of your order on our Excel file (click on [Ord. Sheet])**

*** Please check all the details on the following page to provide correctly all the information about your order on our web page or on the Excel file.**

* Per each order, you can place a maximum of 4 plates

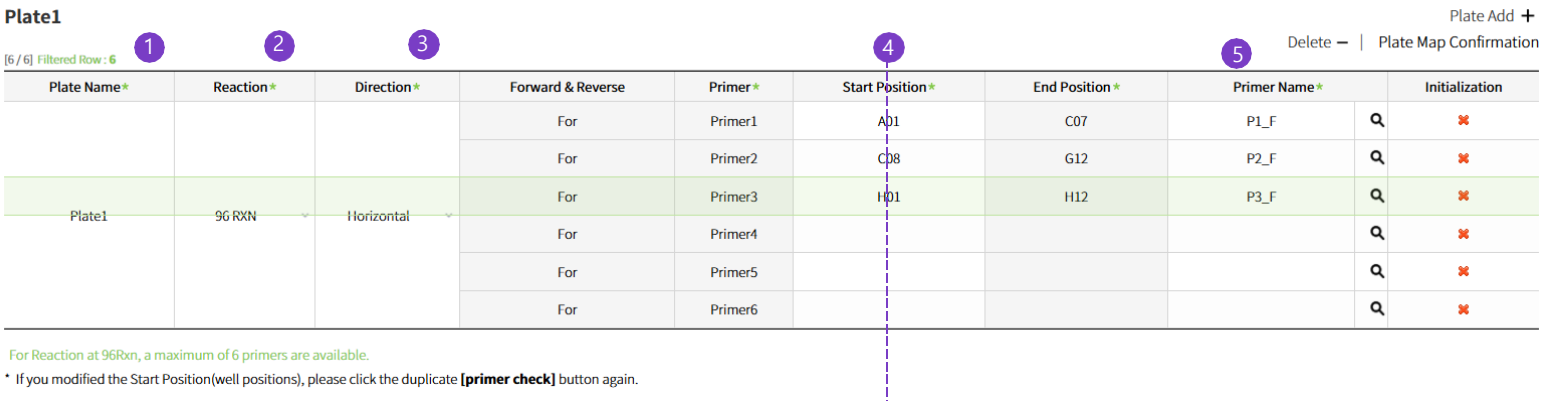
For more than 4 plates, please place separate orders.

* We recommend inserting samples in all the plate.

* Max 6 primers per plate

Multiple primer/1 plate

Option 1 – Fill the information step-by-step on our website



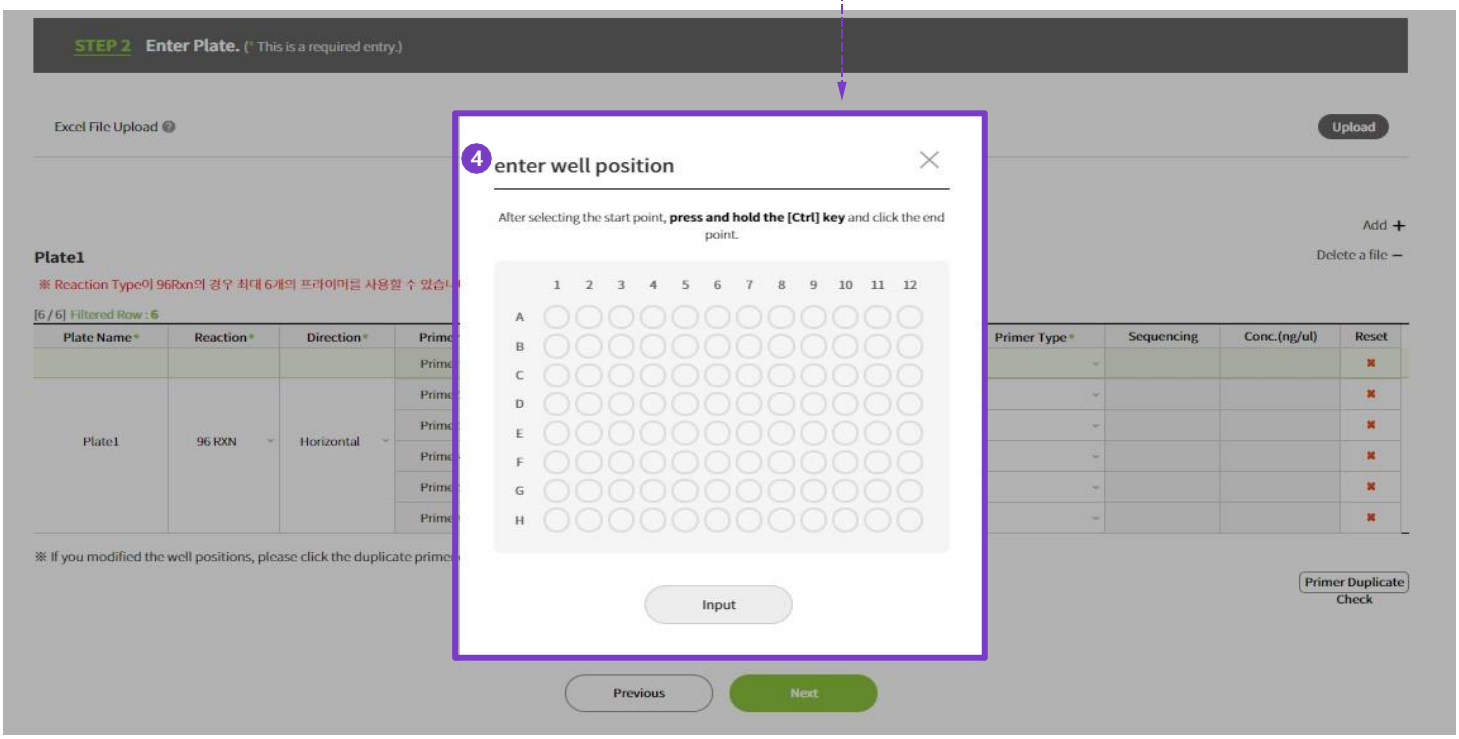
① **Name of the Plate:** Insert the name of the plate

② **Reaction:** Select the number of reactions **[96 Rxn (Unidirectional Sequencing)]**
[192 Rxn (Bidirectional Sequencing)]

③ **Plate direction:** Choose between **[Horizontal], [Vertical]**

④ **Start-End:** Click on the column **Start position** to visualize the page **[Enter well position]**. Select the initial well (es: A1), press **crtl** and select the final well (es: H12). Once you click on input, starting and ending positions will be filled automatically

⑤ **Primer name:** Insert the primer name if you selected the one out **[Enclosed], [Stored], [Synthesis].** In the case of **[universal primers]**, click on the lens and select the desired primer from the new pop-up page (complete primer list: pages 29-30). The name will be automatically filled by the system



Multiple primer/1 plate

Confirm plate map: Once you have provided all the details, click on **Plate map confirmation.**

Sample Information

[5 / 96] Filtered Row : 96

#	Plate Name	Well	Sample Name *	Conc.(ng/ul)	Product Size(bp)(bp)
1	Plate1	A01	Plate1_A01	0	Less 600bp
2	Plate1	A02	Plate1_A02	0	Less 600bp
3	Plate1	A03	Plate1_A03	0	Less 600bp
4	Plate1	A04	Plate1_A04	0	Less 600bp
5	Plate1	A05	Plate1_A05	0	Less 600bp

Reaction Information

[10 / 96] Filtered Row : 96

#	Plate Name	Well	Sample Name	Primer
1	Plate1	A01	Plate1_A01	P1_F
2	Plate1	A02	Plate1_A02	P1_F
3	Plate1	A03	Plate1_A03	P1_F
4	Plate1	A04	Plate1_A04	P1_F
5	Plate1	A05	Plate1_A05	P1_F
6	Plate1	A06	Plate1_A06	P1_F
7	Plate1	A07	Plate1_A07	P1_F
8	Plate1	A08	Plate1_A08	P1_F
9	Plate1	A09	Plate1_A09	P1_F
10	Plate1	A10	Plate1_A10	P1_F

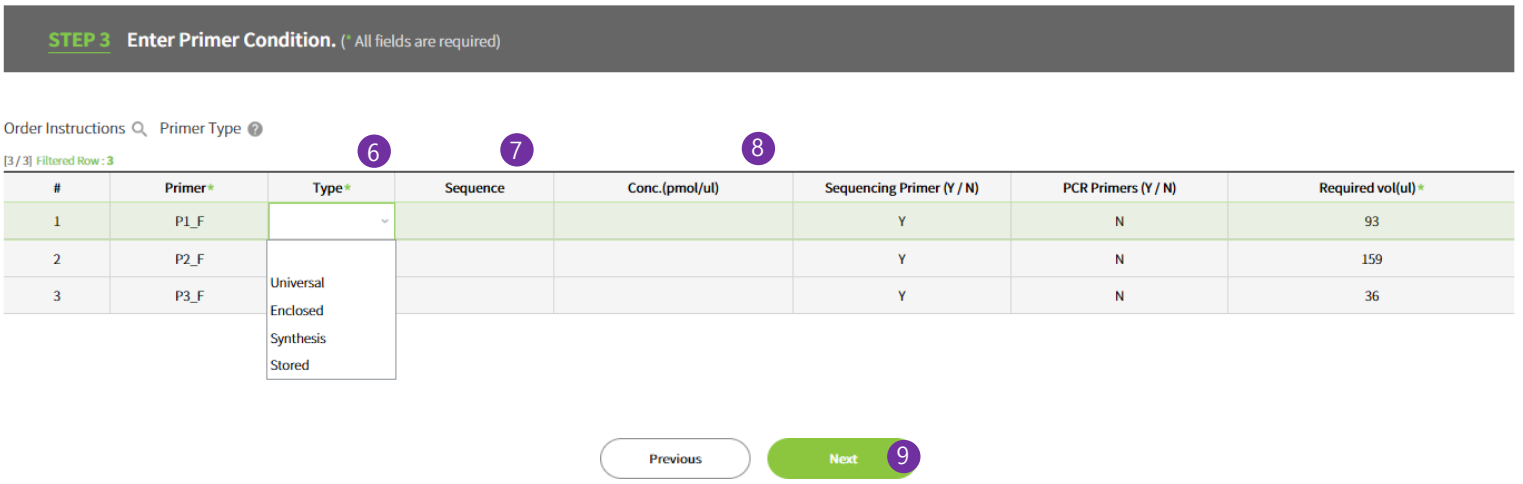
Specify the concentration of the primers and click on **Save & Plate View.** You will be able to visualize the plate layout (Sample and Primer name) per well (See below). **Close the plate layout and continue.**

- 96 RXN

	1	2	3	4	5	6	7	8	9	10	11	12
A	Plate1_A01 P1_F	Plate1_A02 P1_F	Plate1_A03 P1_F	Plate1_A04 P1_F	Plate1_A05 P1_F	Plate1_A06 P1_F	Plate1_A07 P1_F	Plate1_A08 P1_F	Plate1_A09 P1_F	Plate1_A10 P1_F	Plate1_A11 P1_F	Plate1_A12 P1_F
B	Plate1_B01 P1_F	Plate1_B02 P1_F	Plate1_B03 P1_F	Plate1_B04 P1_F	Plate1_B05 P1_F	Plate1_B06 P1_F	Plate1_B07 P1_F	Plate1_B08 P1_F	Plate1_B09 P1_F	Plate1_B10 P1_F	Plate1_B11 P1_F	Plate1_B12 P1_F
C	Plate1_C01 P1_F	Plate1_C02 P1_F	Plate1_C03 P1_F	Plate1_C04 P1_F	Plate1_C05 P1_F	Plate1_C06 P1_F	Plate1_C07 P1_F	Plate1_C08 P2_F	Plate1_C09 P2_F	Plate1_C10 P2_F	Plate1_C11 P2_F	Plate1_C12 P2_F
D	Plate1_D01 P2_F	Plate1_D02 P2_F	Plate1_D03 P2_F	Plate1_D04 P2_F	Plate1_D05 P2_F	Plate1_D06 P2_F	Plate1_D07 P2_F	Plate1_D08 P2_F	Plate1_D09 P2_F	Plate1_D10 P2_F	Plate1_D11 P2_F	Plate1_D12 P2_F
E	Plate1_E01 P2_F	Plate1_E02 P2_F	Plate1_E03 P2_F	Plate1_E04 P2_F	Plate1_E05 P2_F	Plate1_E06 P2_F	Plate1_E07 P2_F	Plate1_E08 P2_F	Plate1_E09 P2_F	Plate1_E10 P2_F	Plate1_E11 P2_F	Plate1_E12 P2_F
F	Plate1_F01 P2_F	Plate1_F02 P2_F	Plate1_F03 P2_F	Plate1_F04 P2_F	Plate1_F05 P2_F	Plate1_F06 P2_F	Plate1_F07 P2_F	Plate1_F08 P2_F	Plate1_F09 P2_F	Plate1_F10 P2_F	Plate1_F11 P2_F	Plate1_F12 P2_F
G	Plate1_G01 P2_F	Plate1_G02 P2_F	Plate1_G03 P2_F	Plate1_G04 P2_F	Plate1_G05 P2_F	Plate1_G06 P2_F	Plate1_G07 P2_F	Plate1_G08 P2_F	Plate1_G09 P2_F	Plate1_G10 P2_F	Plate1_G11 P2_F	Plate1_G12 P2_F
H	Plate1_H01 P3_F	Plate1_H02 P3_F	Plate1_H03 P3_F	Plate1_H04 P3_F	Plate1_H05 P3_F	Plate1_H06 P3_F	Plate1_H07 P3_F	Plate1_H08 P3_F	Plate1_H09 P3_F	Plate1_H10 P3_F	Plate1_H11 P3_F	Plate1_H12 P3_F

* You do not need to insert the sample names. They will be automatically generated from their corresponding position in the plate.

Multiple primer/1 plate



⑥ **Type of Primer** Select your primer type:

- **Universale:** Universal primers available at Macrogen
- **Enclosed:** Primer sent with the samples. Concentration must be specified
- **Synthesis:** If you need us to synthetize your primers

If you choose to synthetize the primers, it will require 3-4 additional working days. Keep track of the shipping times and be sure to choose the Regular Standard Sequencing Option when placing the order.

-**Stored:** Primers used in previous orders. The name must match exactly

⑦ **Sequence:** Insert the sequence if you have selected the **[Synthesis]** option.

⑧ **Conc:** Insert the concentration if you have selected the **[Enclosed]**

⑨ **Next**: Click on **[Next]**.

Multiple primer/1 plate

Option 2 – Excel file

Plate No	1
Plate Name	Plate1
Reaction Type	96Rxn
Plate Layout	Horizontal

※ Primer Name컬럼의 경우는 Universal프라이머만 보여집니다. "동봉/제작 프라이머"의 경우 프라이머명을 직접 입력하세요.

Primers	Start Position	End Position	Primer Name	Primer Type	Sequence (5` To 3`)	Conc(pmol/ul)
Primer 1	A1	F1	785F	Universal		
Primer 2	F2	G1	907R	Universal		
Primer 3	G2	H12	M13-FP	Universal		
Primer 4						
Primer 5						
Primer 6						

	1	2	3	4	5	6	7	8	9	10	11	12
A	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F
B	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F
C	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F
D	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F
E	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F	785F
F	785F	907R	907R	907R	907R	907R	907R	907R	907R	907R	907R	907R
G	907R	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP
H	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP	M13-FP

① **Name of the Plate:** Insert the name of the plate

② **Reaction type:** Select the number of reactions **[96 Rxn (Unidirectional Sequencing)] [192 Rxn (Bidirectional Sequencing)]**

③ **Plate direction:** Choose between **[Horizontal], [Vertical]**

④, ⑤ Check start and end position. The name of the primer will be automatically filled per each well.

⑥ **Primer name:** Insert the name of the primer if you choose the one among the **[Enclosed], [Stored], [Synthesis]** options. Select primer universal in the case of **[Universal]**.

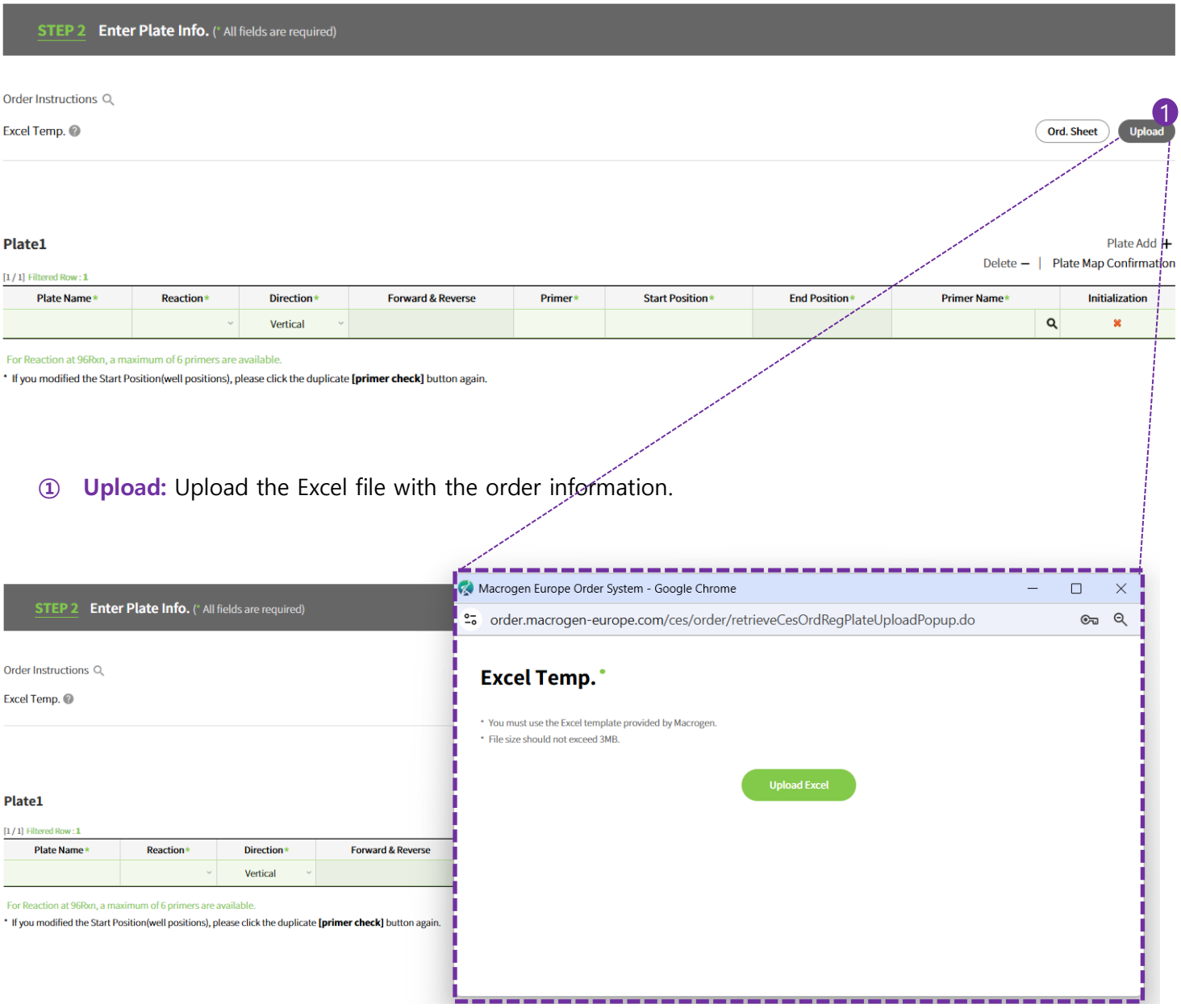
⑦ **Primer type**: Select your primer type

- **Universal:** Universal primers available at Macrogen
- **Enclosed:** If you are sending your primers together with your samples in the same package. Indicate the concentration of the primer.
- **Synthesis:** If you need us to synthetize your primers
- **Stored:** Primers used in previous orders. The name must match exactly

⑧ **Sequence:** Insert the sequence of the primer if you have selected the **[Synthesis]** option.

⑨ **Conc.:** Insert the concentration if you have selected the **[Enclosed]** option

Multiple primer/1 plate



① **Upload:** Upload the Excel file with the order information.

Previous Next

Multiple primer/1 plate

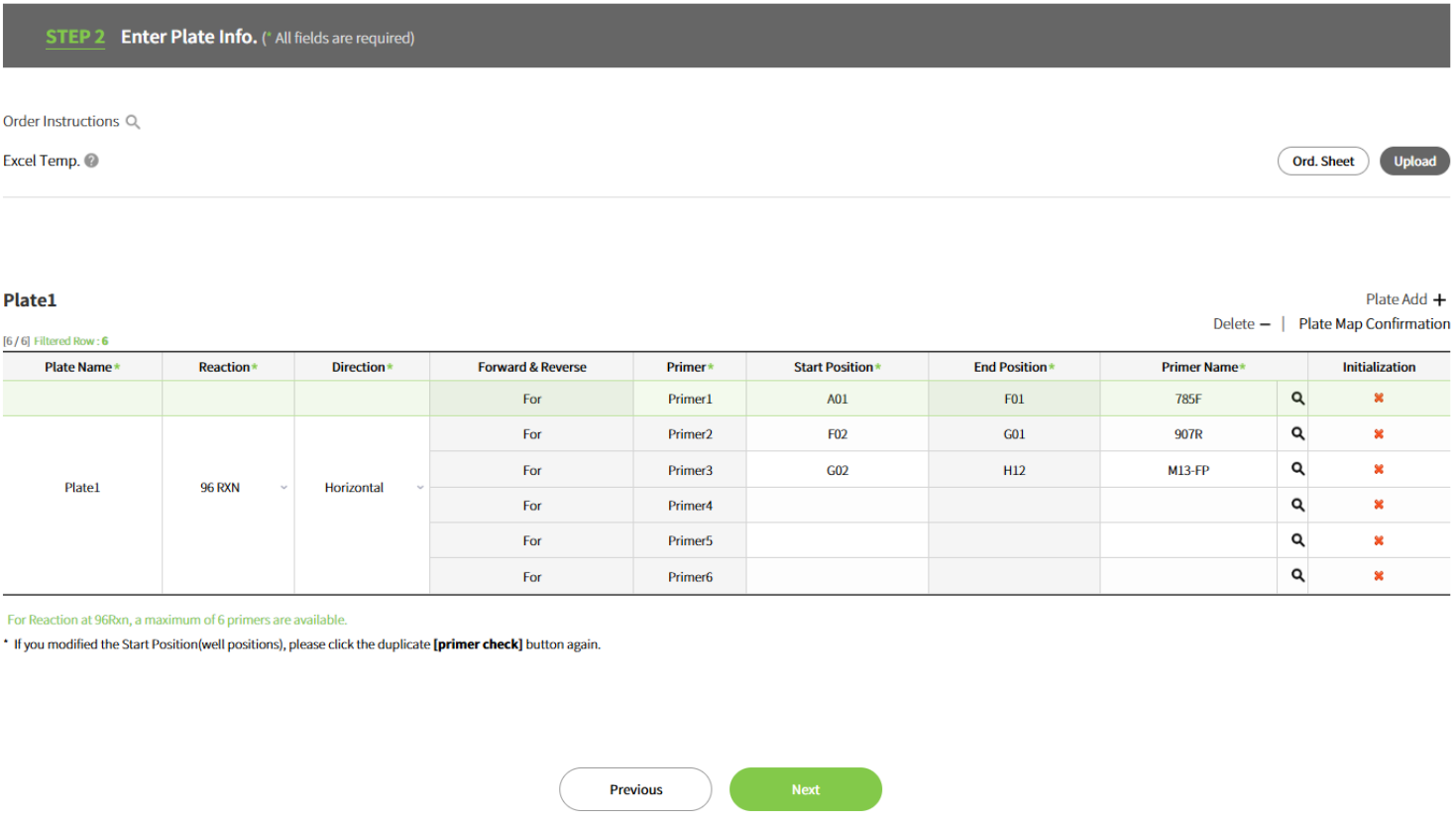
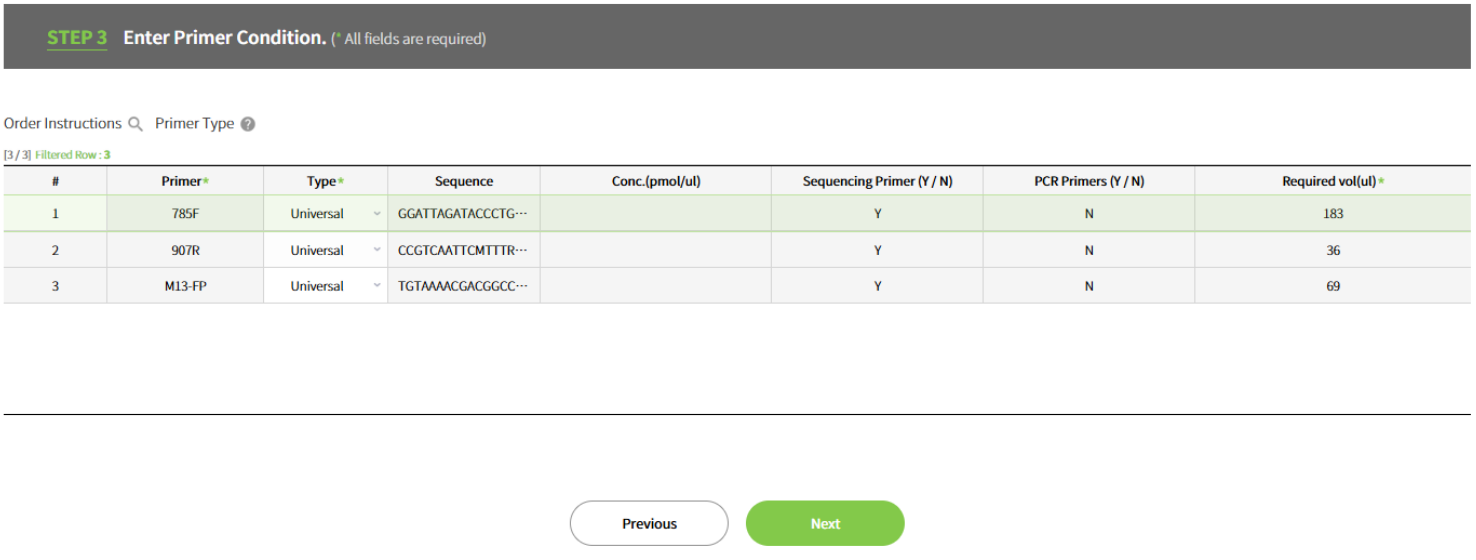
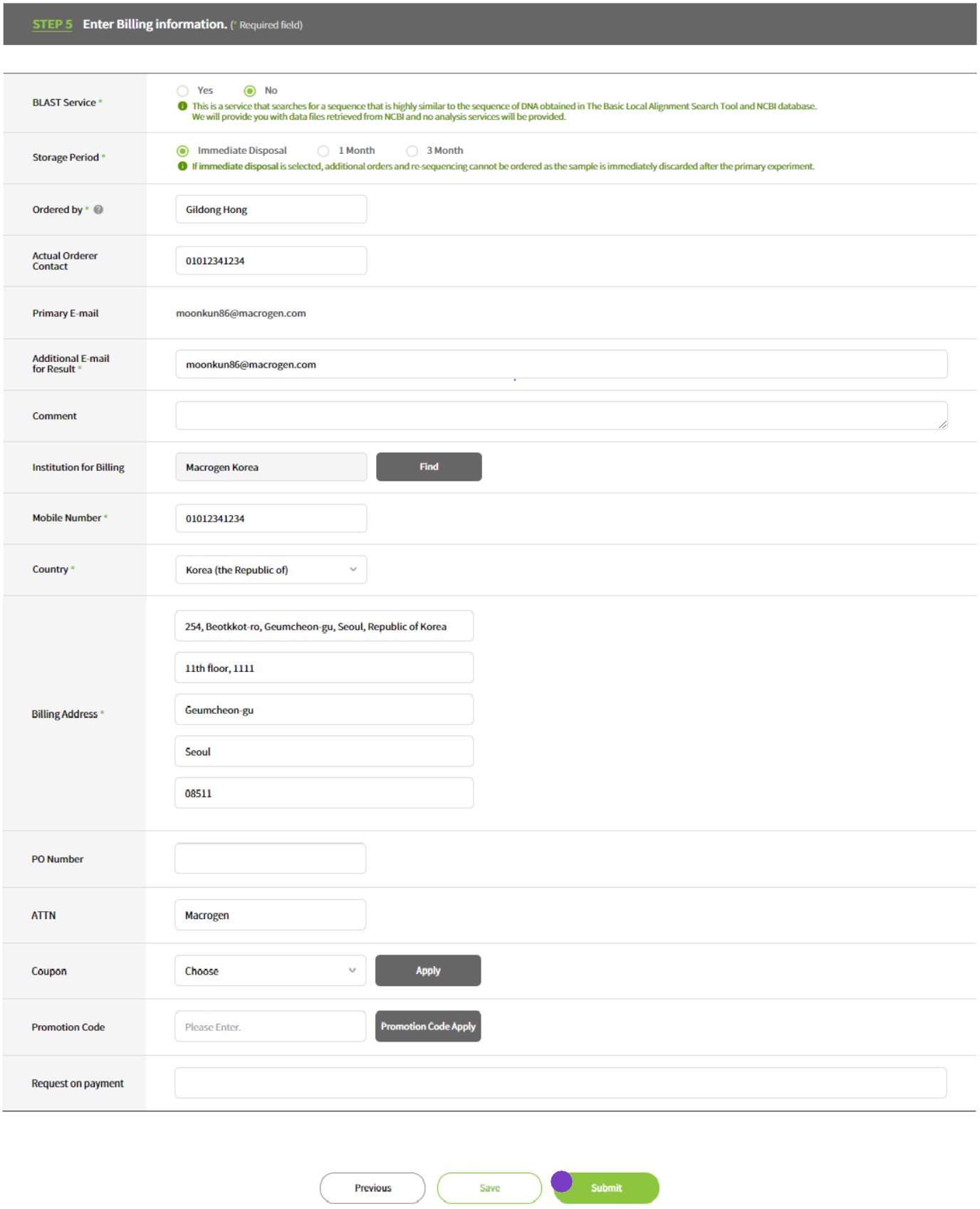


Plate info: Please check that all the details were placed correctly. Proceed by clicking on **[Next]**



Primer Condition: Please check the details about the primers and click on **[Next]**.

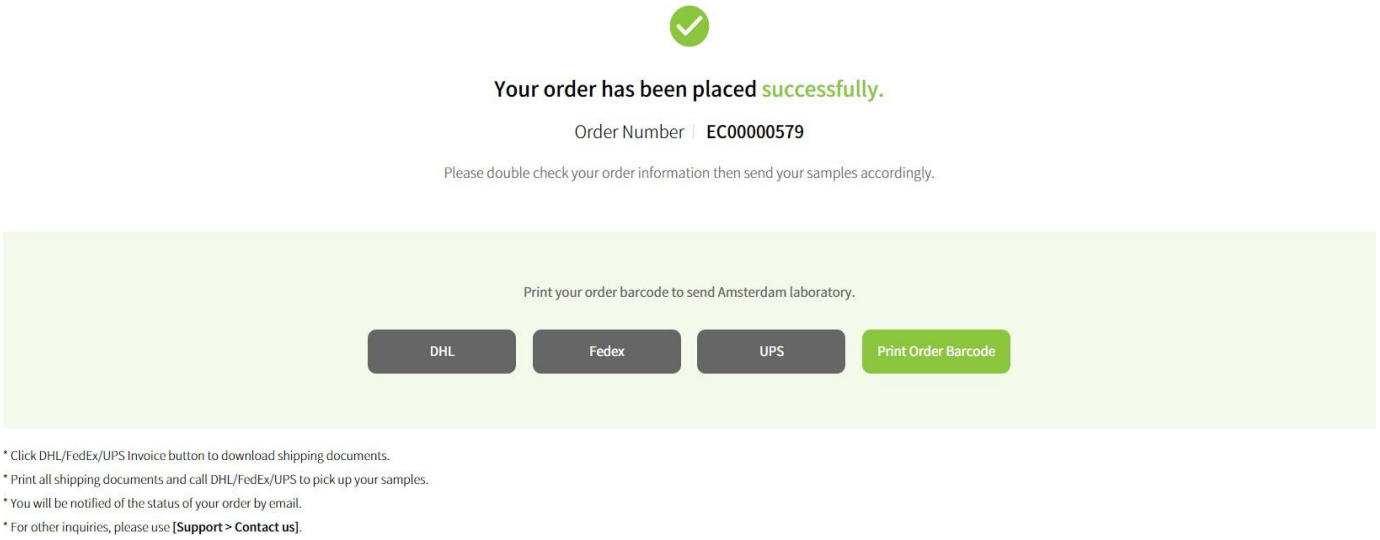
Multiple primer/1 plate



① Enter all billing information, select the **options for BLAST Service** and **Storage Period**, and click **[Submit].**

If "Immediate Disposal" is selected, no further orders or sequencing can be performed, as the sample will be discarded immediately after the main experiment.

Multiple primer /1 plate



* You can check the order number and obtain your **[DHL/FedEx/UPS commercial invoice]**.
  Please **print the barcode** order and send it together with the samples.

STEP 6 Order Confirmation (* In the [Order completed] step, you cannot modify it.)

Order Information

Order Number	EC00000579	Customer Name	nl test
Service	Standard Sequencing	Sample Type	Plasmid
Tube Type	96 Well Plate	Run Type	Regular

Order History

Sample History

Rxn.	1	Sample	1
Number of additional service sample	0	DNA Extraction	0
Primer Synth.	0	PCR Amplification	0

Primer History

Universal	0	Enclosed	1
Synthesis	0	Stored	0

* Finally, please **verify all the information about your order**

Universal primer list

Universal primers, available without additional costs

Primer Name	Sequence
Bluescript SK	CGCTCTAGAACTAGTGGATC
EBV-RP	GTGGTTTGTCCAAACTCATC
KAN2-FP	ACCTACAACAAAGCTCTCATCAACC
KAN2-RP	GCAATGTAACATCAGAGATTTTGAG
M13-FP	TGTAAAACGACGGCCAGT
pBacPAC-RP	GTCTGTAAATCAACAACGC
pBAD-FP	ATGCCATAGCATTTTTATCC
pDONOR-FP	TAACGCTAGCATGGATCTC
pEGFP_N	CCGTCCAGCTCGACCAG
pEGFP-FP	TTTAGTGAACCGTCAGATC
pEGFP-RP	AACAGCTCCTCGCCCTTG
pESP-RP	TCCAAAAGAAGTCGAGTGG
pET-24a	GGGTTATGCTAGTTATTGCTCAG
pET-RP	CTAGTTATTGCTCAGCGG
pMalE	TCAGACTGTCGATGAAGC
pREP-fwd	GCTCGATACAATAAACGCC
35S-A	AAGGGTCTTGCGAAGGATAG
35S-B	AGTGGAAAAGGAAGGTGGCT
AD Reverse	AGATGGTGCACGATGCACAG
CYC1 Reverse	GCGTGAATGTAAGCGTGAC
DsRed1-C	AGCTGGACATCACCTCCCACAACG
DsRed1-N	GTACTGGAACTGGGGGGACAG
EGFP-C	CATGGTCCTGCTGGAGTTCGTG
EGFP-N	CGTCGCCGTCCAGCTCGACCAG
GAL1 Forward	AATATACCTCTATACTTTAACGTC
U-19mer Primer	GTTTTCCCAGTCACGACGT
T7 EEV	ATGTCGTAATAACCCCGCCCCG
Bluescript KS	TCGAGGTCGACGGTATC
pFastBac Forward	GGATTATTCATACCGTCCCA
pFastBac Reverse	CAAATGTGGTATGGCTGATT
AOX1 Forward	GACTGGTTCCAATTGACAAGC
AOX1 Reverse	GCAAATGGCATTCTGACATCC
a-Factor	TACTATTGCCAGCATTGCTGC
STag 18mer Primer	GAACGCCAGCACATGGAC
MT Forward	CATCTCAGTGCAACTAAA
QE Promoter	CCGAAAAGTGCCACCTG
pRH Forward	CTGTCTCTATACTCCCCTATAG
pRH Reverse	CAAAATTCAATAGTTACTATCGC
SV40-pArev	CCTCTACAAATGTGGTATGG
SV40-Promoter	GCCCCTAACTCCGCCCATCC
pTrcHis Forward	GAGGTATATATTAATGTATCG
ITS1	TCCGTAGGTGAACCTGCGG
ITS2	GCTGCGTTCTTCATCGATGC
ITS3	GCATCGATGAAGAACGCAGC

Universal primer list

Universal primers, available without additional costs

ITS4	TCCTCCGCTTATTGATATGC
ITS5	GGAAGTAAAAGTCGTAACAAGG
pJET1.2F	CGACTCACTATAGGGAGAGCGGC
pJET1.2R	AAGAACATCGATTTTCCATGGCAG
T7	AATACGACTCACTATAG
T7terminator	GCTAGTTATTGCTCAGCGG
T7promoter	TAATACGACTCACTATAGGG
T3	ATTAACCCTCACTAAAG
SP6	ATTTAGGTGACACTATAG
M13F-pUC(-40)	GTTTTCCCAGTCACGAC
M13R-pUC(-40)	CAGGAAACAGCTATGAC
M13F	GTAAAACGACGGCCAGT
M13R	GCGGATAACAATTTCACACAGG
pGEX5	GGCAAGCCACGTTTGGTG
pGEX3	GGAGCTGCATGTGTCAGAGG

27F	AGAGTTTGATCMTGGCTCAG
1492R	TACGGYTACCTTGTTACGACTT
518F	CCAGCAGCCGCGGTAATACG
800R	TACCAGGGTATCTAATCC
BGH-R	TAGAAGGCACAGTCGAGG
CMV-F	CGCAAATGGGCGGTAGGCGTG
RVprimer3	CTAGCAAAATAGGCTGTCCC
RVprimer4	GACGATAGTCATGCCCCGCG
GLprimer1	TGTATCTTATGGTACTGTAACTG
GLprimer2	CTTTATGTTTTTGGCGTCTTCCA
pQE-F	CCCGAAAAGTGCCACCTG
pQE-R	GTTCTGAGGTCATTACTGG
Gal4AD	TACCACTACAATGGATG
pBAD-F	ATGCCATAGCATTTTTATCCA
pBAD-R	GATTTAATCTGTATCAGG

EGFP-CF	AGCACCCAGTCCGCCCTGAGC
EGFP-CR	CGTCCATGCCGAGAGTG
EGFP-NR	CGTCGCCGTCCAGCTC
LCO1490	GGTCAACAAATCATAAAGATATTGG
HCO2198	TAAACTTCAGGGTGACCAAAAAATCA
785F	GGATTAGATACCCTGGTA
907R	CCGTCAATTCMTTTRAGTTT
337F	GACTCCTACGGGAGGCWGCAG
1100R	GGGTTGCGCTCGTTG
NS1	GTAGTCATATGCTTGTCTC
NS8	TCCGCAGGTTCACCTACGGA
LR0R	ACCCGCTGAACTTAAGC
LR7	TACTACCACCAAGATCT