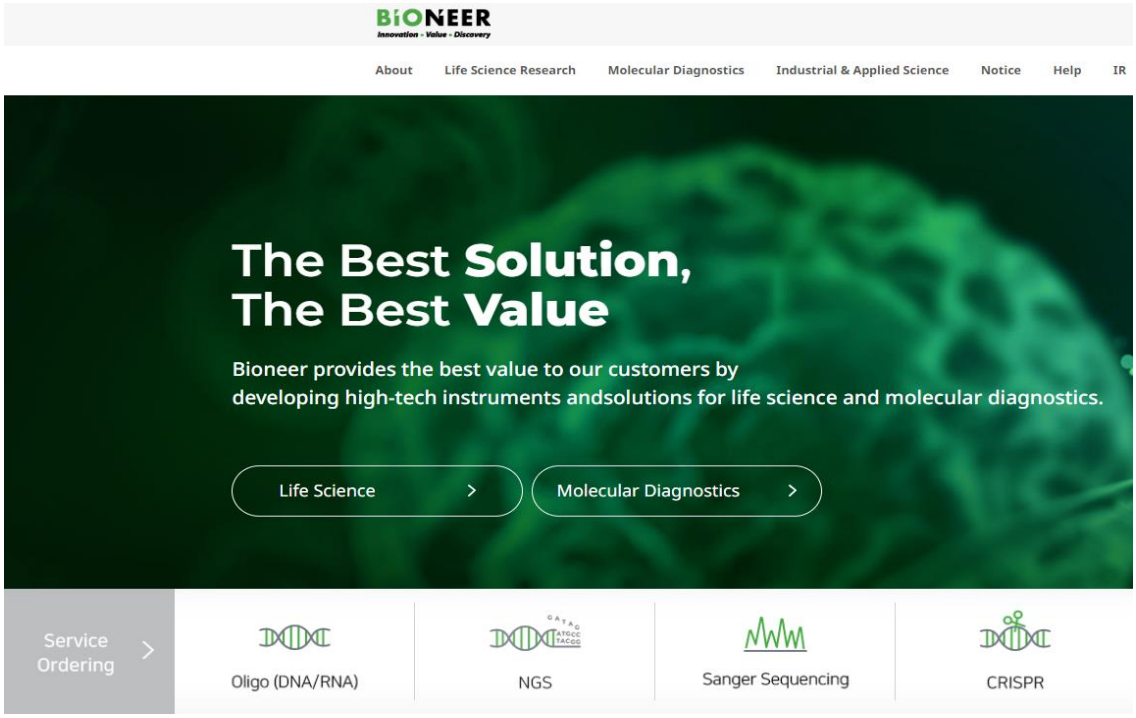
Instructions to order Oligo(DNA/RNA)

DNA Order method

o website address : https://eng.bioneer.com/

o Register and login

o Click on 'Oligo (DNA / RNA)' from the main page



-Turnaround time (working day)

To purificate BioRP : Takes about 1~2 days.

To purificate HPLC and PAGE : Takes about 3~4 days include Modification.

o Actual recipient (Name of person to contact) : If the name of the buyer is different from the recipient, please change buyer's name to the recipient's name on the report sheet, so that the name of actual recipient will be displayed and printed out as you put in the report sheet.

- Ex: If you change your contact person name to 'Oligo' after logging in as 'Bioneer', it will be displayed as 'Bioneer (Oligo)' on the report sheet.

o Contact Mobile Phone : Please enter the recipient's phone number.

o Comments : Please fill out any additional inquiries.

To input DNA

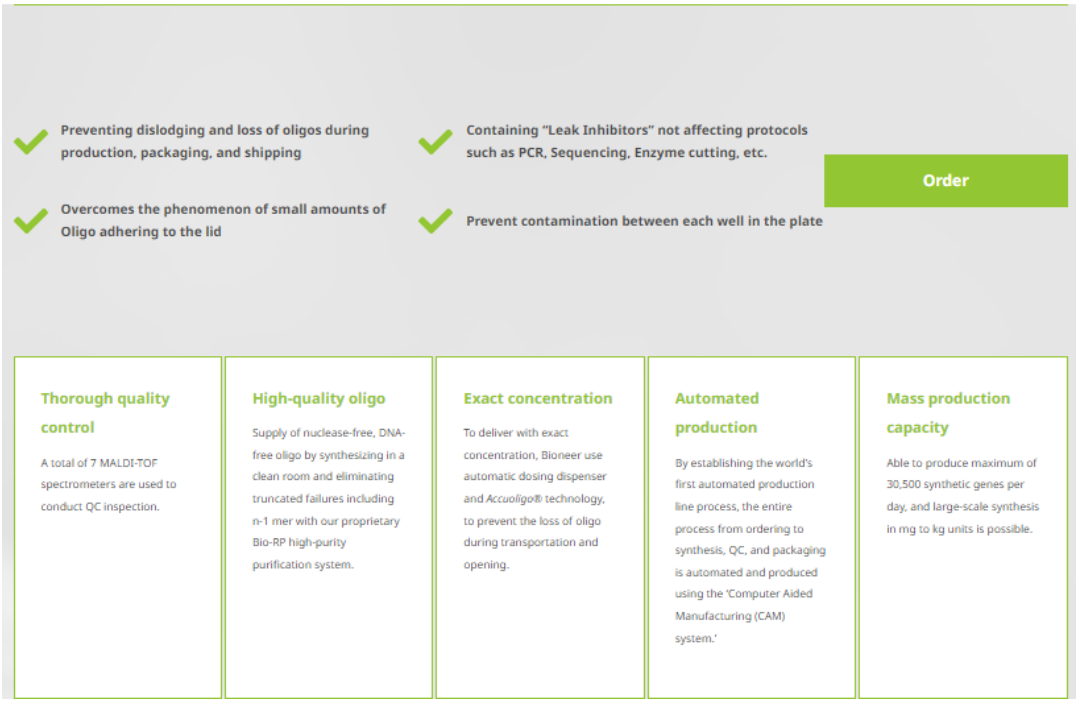
o The oligo name cannot use '#, |" etc.

o The oligo sequence cannot contain spaces and special characters.

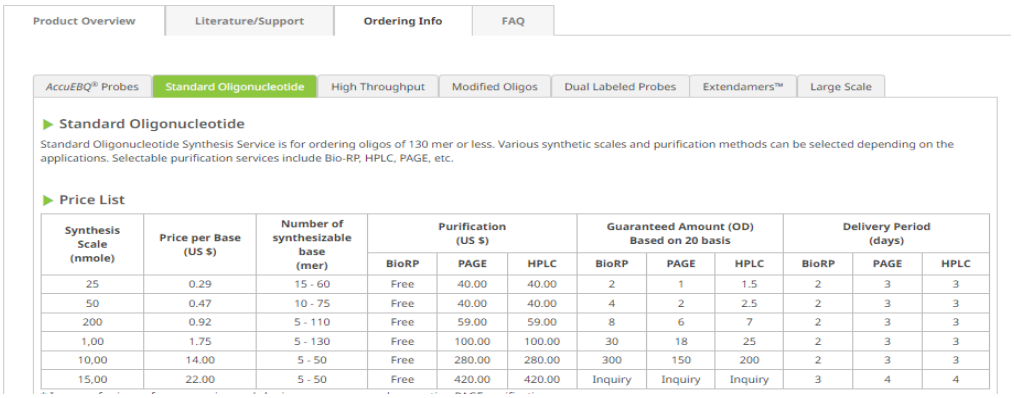
DNA

All oligos provided by Bioneer are applied to the *AccuOligo*® system, and all oligos are produced in a clean room and supplied to customers in a DNase, RNase, and DNA free state. Generally, supplied oligos go through synthesis, purification, QC, and dispensing processes, are dried, and are then delivered to customers. In the case of conventional synthesis services, there is a chance that dried oligos may fall during their delivery from shaking and impacts.

If the containers are opened during the delivery, parts of oligos may fall out, leading to yield loss. This may be much more severe when ordered in plates as cross-contaminations may occur. *AccuOligo*® technology allows the synthesized oligonucleotides to stick at the bottom of the tube even under intense vibrations. (Dried oligonucleotide composition of the new patent application' Patent 2006 Registration Number 10-0777249)

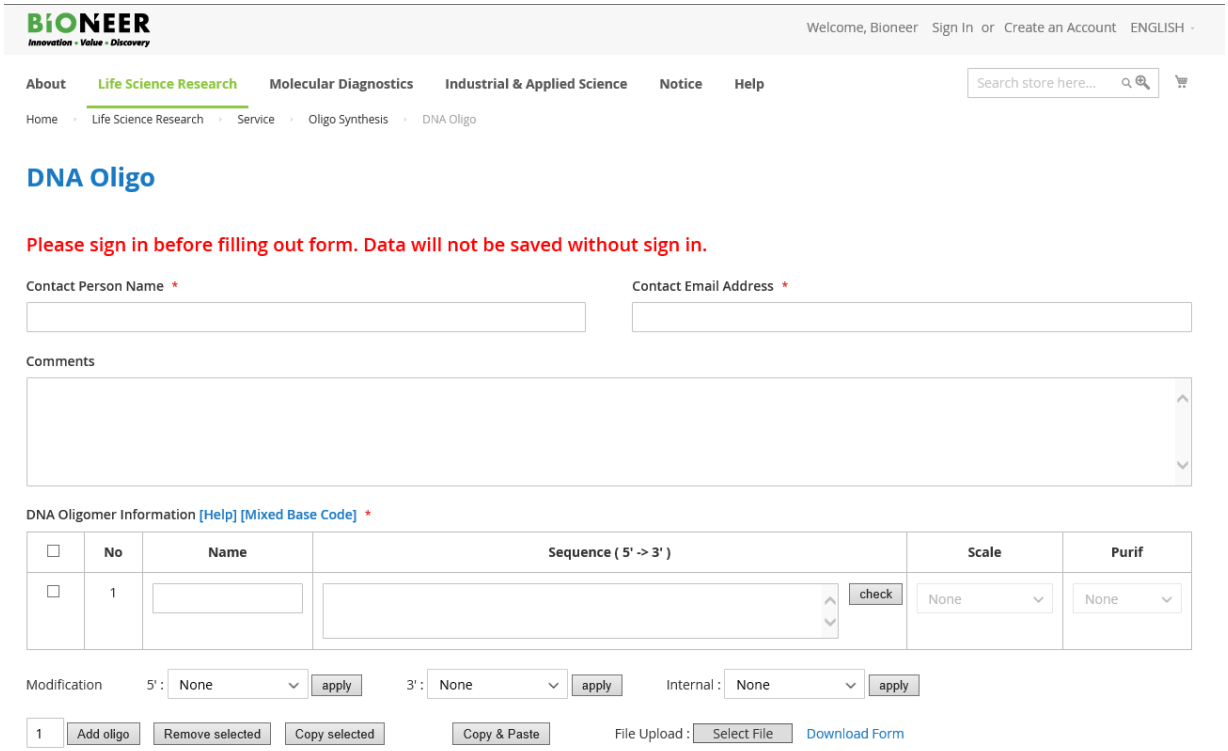


o **Please refer to the content provided in each tab for details before placing an order.**



Synthesis Scale (nmole)	Price per Base (US $)	Number of synthesizable base (mer)	Purification (US $)			Guaranteed Amount (OD) Based on 20 basis			Delivery Period (days)		
			BioRP	PAGE	HPLC	BioRP	PAGE	HPLC	BioRP	PAGE	HPLC
25	0.29	15 - 60	Free	40.00	40.00	2	1	1.5	2	3	3
50	0.47	10 - 75	Free	40.00	40.00	4	2	2.5	2	3	3
200	0.92	5 - 110	Free	59.00	59.00	8	6	7	2	3	3
1,00	1.75	5 - 130	Free	100.00	100.00	30	18	25	2	3	3
10,00	14.00	5 - 50	Free	280.00	280.00	300	150	200	2	3	3
15,00	22.00	5 - 50	Free	420.00	420.00	Inquiry	Inquiry	Inquiry	3	4	4

Order Information Input Form



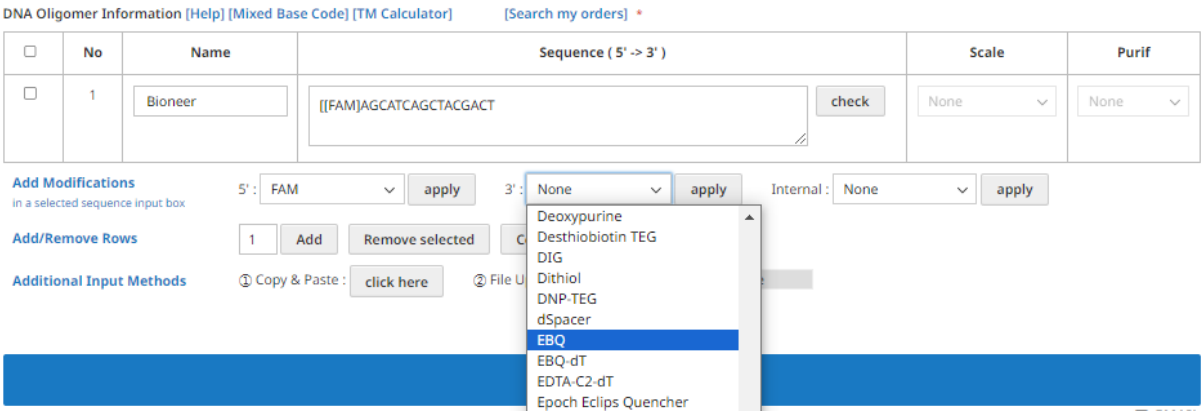
The input procedure is as follows:

1. **Name: Enter the Oligo Name.**
2. **Sequences: Enter the nucleotide sequence information.**
3. **Click the Check button to activate the Scale / Purif selection window**

Modification selection:

1. Enter the sequence, then select the required items at 5', 3', and internal positions, and click the Apply button.

- Fluorescent Dye Probes are only available for selection of either HPLC or PAGE purification.



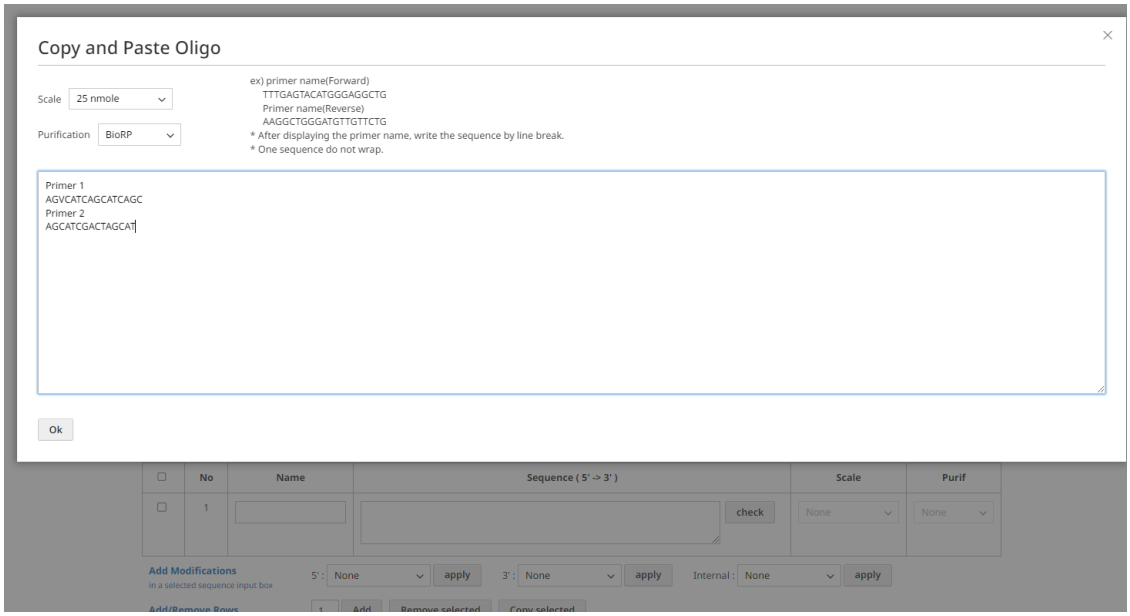
2. After completing the input, click the "Add to Cart" button to review the entered information and proceed to the payment stage.

A. Copy & paste : It is convenient, if you have sequence for various Oligos.

1. Select scale and purification.

2. Prepare a file with oligo names and oligo sequences.

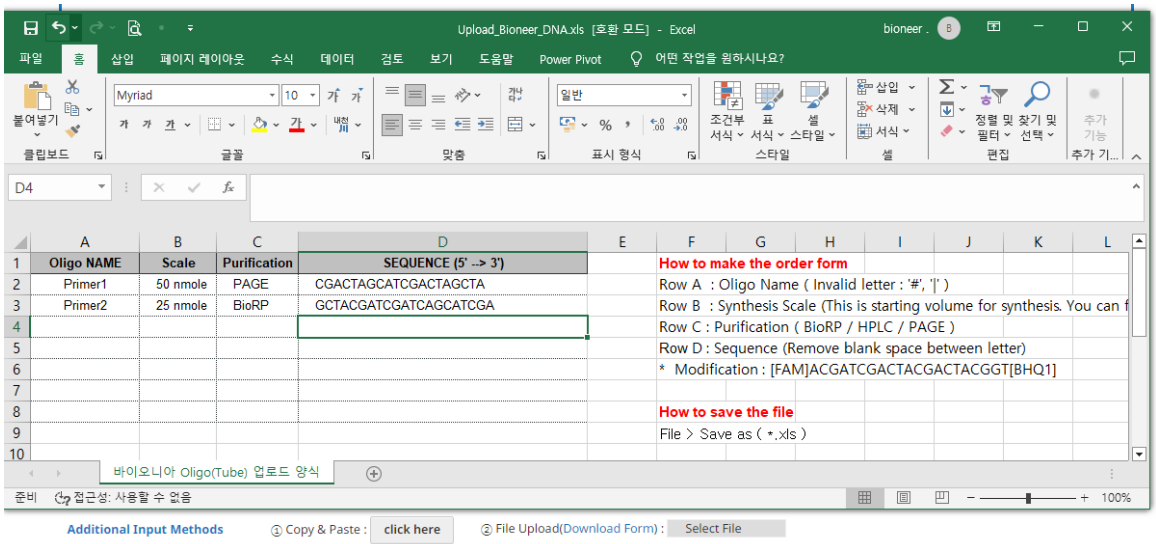
3. If you paste the contents, press 'OK' button, then it will check the contents automatically and show you the table with the data applied as Oligo sequence, scale, purification, etc.



B. Upload Excel file : It is convenient for bulk order, also you can use this when the scale or purification method is different for each oligo.

1. Download Excel form file, enter details for oligo and upload, then it will be applied and displayed as a table on the order page.

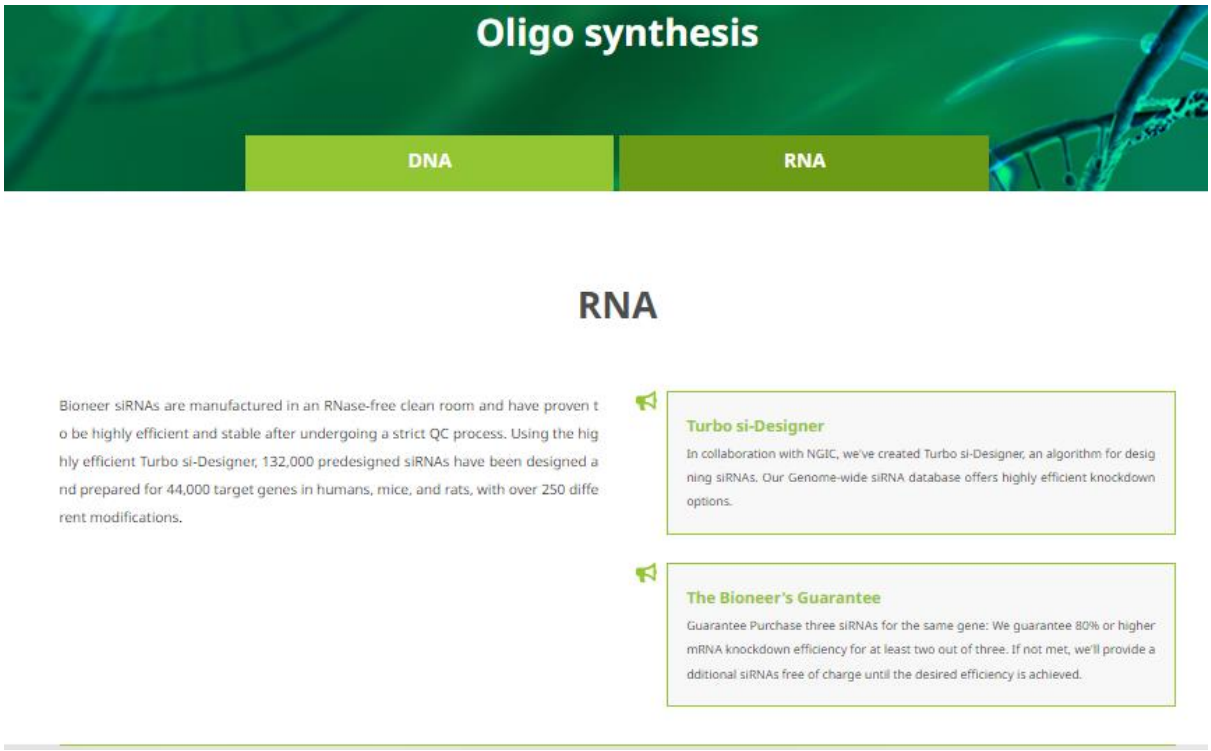
2. If you have any modification, you can apply Bioneer's labeling method or you can modify each of them from the table after upload the file.



Edit, cancel order

o Click the 'red pencil' icon from the oligo order in the shopping cart and click 'Update cart' after adding, deleting or changing the oligo. Click the trash icon to delete the entire oligo order.

RNA Order method



-Turnaround time (working day)

To purificate BioRP : Takes about 2~3 days.

To purificate HPLC and PAGE : Takes about 4~5 days include Modification.

o Actual recipient (Name of person to contact) : If the name of the buyer is different from the recipient, please change buyer's name to the recipient's name on the report sheet, so that the name of actual recipient will be displayed and printed out as you put in the report sheet.

- Ex: If you change your contact person name to 'Oligo' after logging in as 'Bioneer', it will be displayed as 'Bioneer (Oligo)' on the report sheet.

o Contact Mobile Phone : Please enter the recipient's phone number.

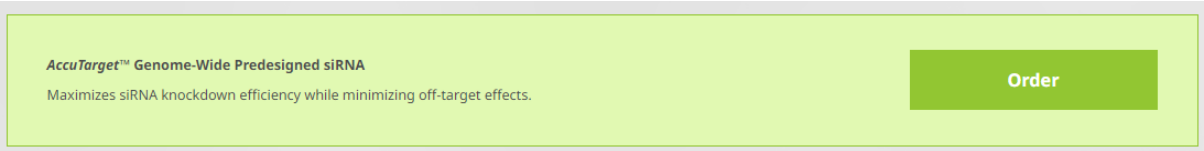
o Comments : Please fill out any additional inquiries.

To input RNA

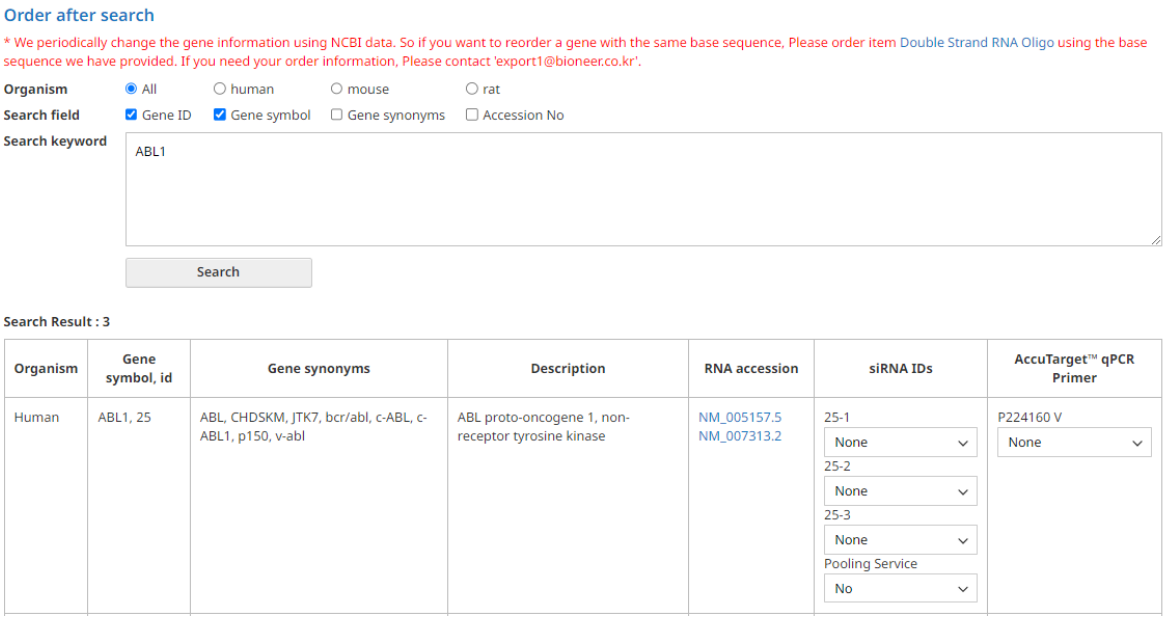
o The oligo name cannot use '#, |" etc.

o The oligo sequence cannot contain spaces and special characters

AccuTarget™ Predesigned siRNA



- Enter Gene symbol or id in the Search Keyword input field and click the Search button.



- Three siRNAs can be selected per gene.
- -1, -2, and -3 are ranked in order of highest theoretical knockdown efficiency.
- qPCR primers for the gene of interest are also available for ordering (100 reactions / 200 reactions).
  ⇨ **When diluted to the indicated reaction volume, the concentration is 15 pmole.**

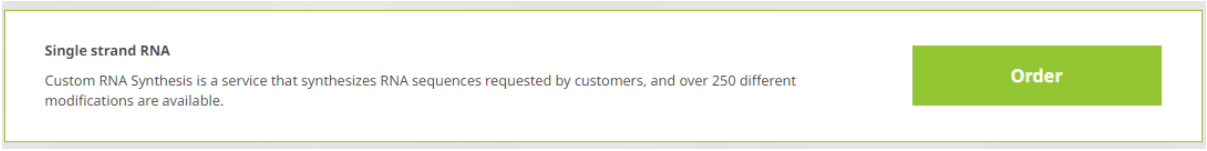
▶ The Bioneer's Guarantee

When you purchase three siRNAs for the same gene, Bioneer guarantees more than 80% knockdown efficiency of the target mRNA level in two out of three. If there is no more than 80% knockdown efficiency at the mRNA level of the target gene, we provide two siRNAs free of charge.

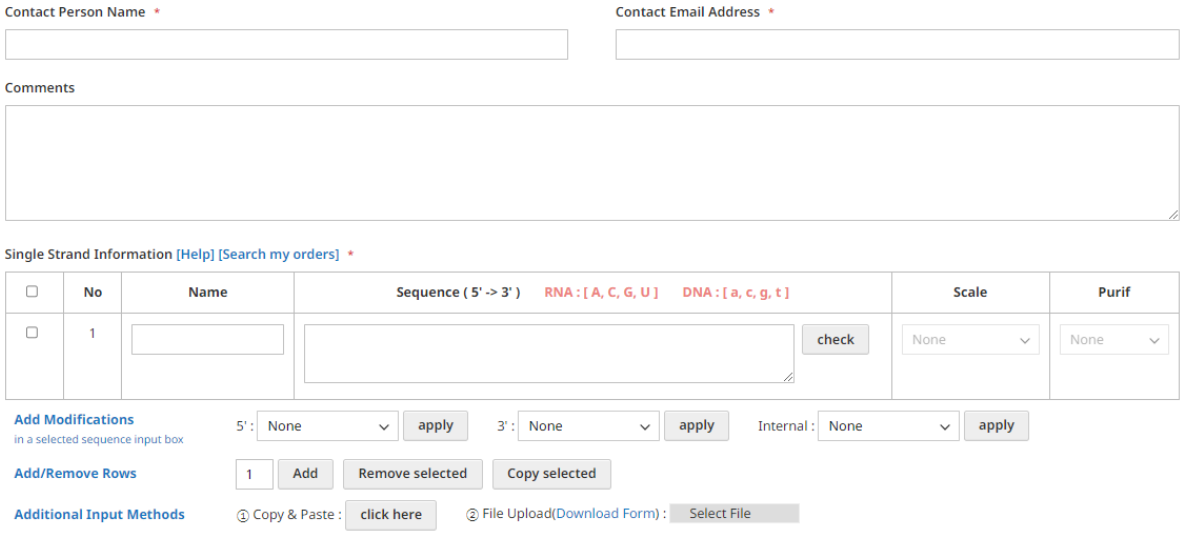
* However, the following supporting data required by the head office must be submitted separately.**1. siRNA Knockdown efficiency data: NC (*AccuTarget™* Negative Control) and siRNA concentration at 100 nM**

2. Transfection efficiency data: PC (*AccuTarget™*GAPDH/GFP/Luciferase siRNA) and NC (AccuTarget™ Fluorescein-labeled Negative Control)

Single Strand RNA(Custom)



- **Enter Gene symbol or id in the Search Keyword input field and click the Search button.**



The input procedure is as follows:

1. **Name: Enter the Oligo Name.**
2. **Sequences: Enter the nucleotide sequence information.**
3. **Click the Check button to activate the Scale / Purif selection window**

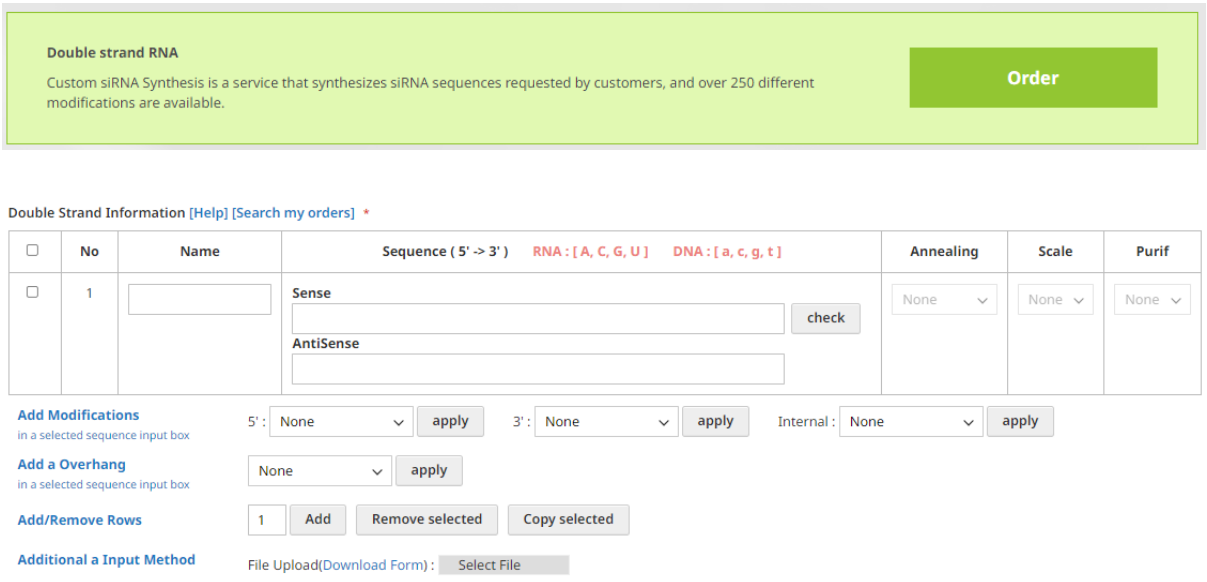
- **On the RNA order page, note if you enter AGCU in capital letter, it will be recognized as RNA base and if you enter it in small letter, it will be recognized as DNA base.**

Modification selection:

1. Enter the sequence, then select the required items at 5', 3', and internal positions, and click the Apply button.

- When selecting Modification, only HPLC purification is available. (PAGE purification service is not provided for RNA products.)

Double Strand RNA(Custom)



1. When entering the Sense sequence, the complementary sequence will automatically be entered into the Antisense field.
   -> To change the Antisense sequence, simply erase the sequence by using the Backspace key and then input the desired sequence.
2. Double-stranded RNA input is allowed for sequences ranging from 5 to 30 nucleotides in length.
3. Clicking the Check button will activate the Annealing, Scale, and Purification selection options.
   -> Selecting "Yes" in Annealing will provide double-stranded RNA, while choosing "No" will provide single-stranded RNA respectively.
4. Add an Overhang: Select your desired Overhang and click the apply button to add it.
5.

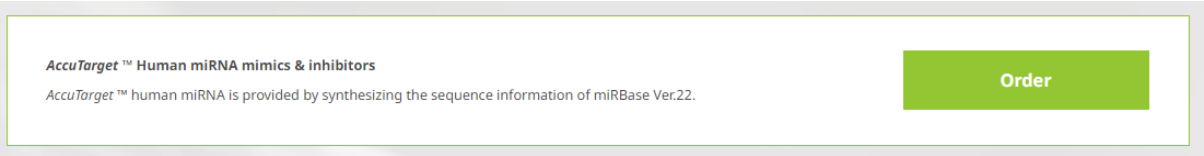
- **On the RNA order page, note if you enter AGCU in capital letter, it will be recognized as RNA base and if you enter it in small letter, it will be recognized as DNA base.**

Modification selection:

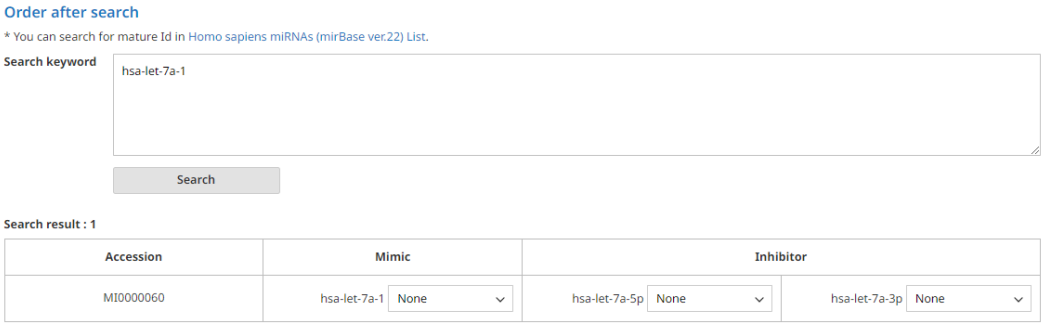
1. Enter the sequence, then select the required items at 5', 3', and internal positions, and click the Apply button.

- When selecting Modification, only HPLC purification is available. (PAGE purification service is not provided for RNA products.)

AccuTarget™ Human miRNA Mimic & Inhibitor



- miRBase site link : https://eng.bioneer.com/mirna-library-mimic



1. Copy and paste the miRNA Mature ID you wish to order from the miRBase link into the search Keyword field, then click the Search button.
2. Choose the desired synthesis scale (nmole) and Purification option before proceeding with your order.
3. Mimic and inhibitor are separate items, so you need to select each one individually.

-> Inhibitor 5p is the complementary sequence of the sense sequence of the mimic, and 3p is the complementary sequence of the antisense.

- If modifications are required, please inquire separately.
- For miRNAs from miRBase Ver.22, if ordering from a different version, please input as Custom (double / single strand) order.

AccuTarget™ siRNA control / miRNA control

AccuTarget ™ **miRNA Controls**

Verified highly efficient target gene KD effect *AccuTarget* ™ PC siRNA (Human GAPDH, GFP, Luciferase)

Order

AccuTarget ™ **siRNA Controls**

Verified highly efficient target gene KD effect *AccuTarget* ™ PC siRNA (Human GAPDH, GFP, Luciferase) Products with low homology to the target *geneAccuTarget* ™ NC siRNA (for Human, Mouse, Rat)

Order

AccuTarget™ GFP Positive Control siRNA

As low as **$76.00**

Purification

BioRP HPLC

Scale

5 nmole 10 nmole 20 nmole

AccuTarget™ GAPDH Positive Control siRNA

As low as **$76.00**

Purification

BioRP HPLC

Scale

5 nmole 10 nmole 20 nmole

AccuTarget™ Control siRNA Set

As low as **$140.00**

Target

GAPDH GFP Luciferase

Purification

BioRP HPLC

AccuTarget™ Negative Control siRNA

As low as **$76.00**

Purification

BioRP HPLC

Scale

5 nmole 10 nmole 20 nmole

AccuTarget™ Luciferase Positive Control siRNA

As low as **$76.00**

Purification

AccuTarget™ Fluorescein-la-beled Negative Control siRNA, HPLC

As low as **$168.00**

AccuTarget™ Luciferase Control siRNA Set (HPLC, 5 nmole/P+2 nmole/N) [SS-1013]

$168.00

AccuTarget™ GFP Control siRNA Set (HPLC, 5 nmole/P+2 nmole/N) [SS-1012]

$168.00

- When ordering the required Control products, simply select the Purification / Scale options and proceed with your order.
- We do not provide sequence information for Control products.
- If modifications are required, please inquire via email along with the modification details.