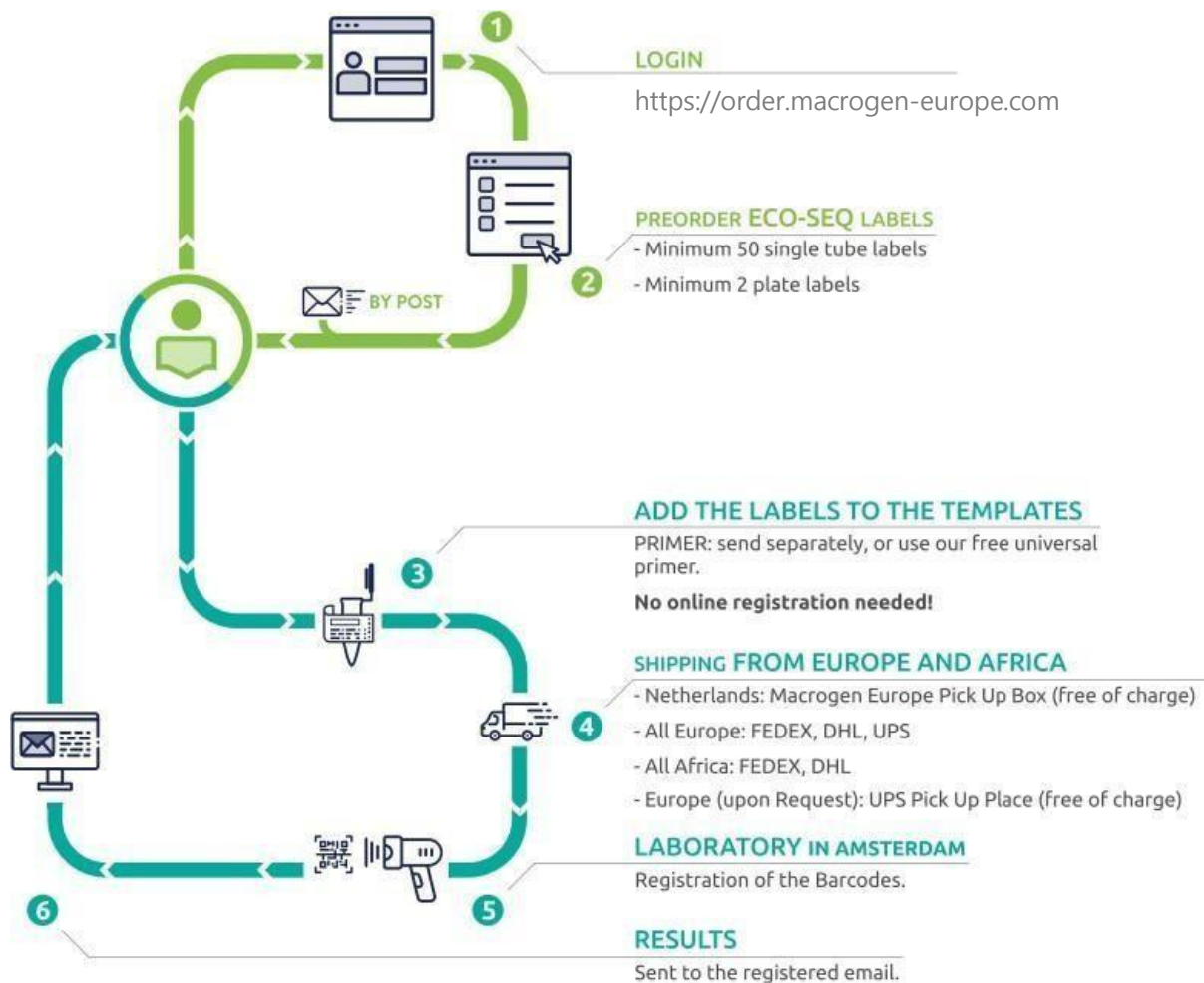




User guide ECO-Seq

Ver_4.0



Eco-Seq is designed to use prepaid labels without the need to pre-mix samples and primers. After placing an order through our online website, the labels are delivered via courier service. Eco-Seq is the most flexible and straightforward barcoding service for scientists, enabling a fast and efficient workflow for sample preparation.

After receiving the labels:

- Please attach the labels to tubes or plates:

Tubes: each barcode can be associated with one primer only.

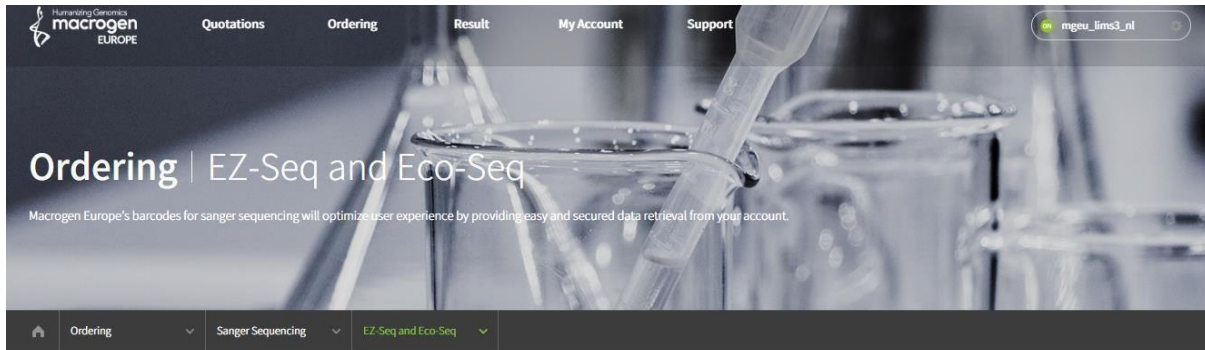
Plates: each barcode can be associated with up to 4 primers.

- Add the sample into the tubes or plates.

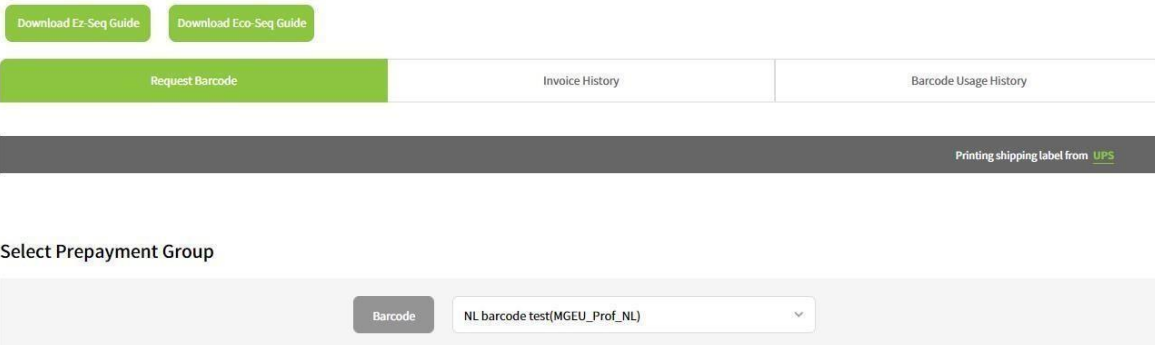
- Please send the samples to the laboratory for sequencing together with the primers, and write the primer name on the tube cap.

Results available within 24/48 hours!

Ordering Instructions



EZ-Seq/Eco-Seq*



- Go to order.macrogen-europe.com.
- Log in to your account Macrogen.
- Select "EZ-Seq and Eco-Seq" in the section "Ordering".

Barcode Information

* All fields are required

A screenshot of the 'Barcode Information' form. The 'Barcode Type' dropdown is set to 'Eco-Seq' (marked with a circled 1). Below it are two columns of options: 'Tube' (with a tube icon) and 'Plate' (with a plate icon). Under 'Tube' are 'Eco-Seq Single Direct (MOQ=50)' and 'Eco-Seq Single Purification (MOQ=50)'. Under 'Plate' are 'Eco-Seq Plate Direct (MOQ=2)' and 'Eco-Seq Plate Purification (MOQ=2)' (marked with a circled 2). At the bottom is a 'Quantity' field with the placeholder text 'Please enter numbers only.'.

- ① In "Barcode Information", select "Eco-Seq".
- ② Select the sample type (tube or plate) and add the number of labels (Min. Tube 50 labels, Plates: 2 labels).

Sample Preparation

The following requirements are highly recommended to obtain good results:

Please prepare *Samples* 

and *Primers* 

Separately!

Sample and Primer Preparation 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

*** If plasmids are longer, please increase concentration accordingly.**

Primer Concentration

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

Primer Preparation

Primer Concentration:

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

Primer Volume:

More than 20 μ L (sufficient for 4–5 reactions).

- High purity
- Appropriate concentration
- No secondary priming sites
- No mismatches
- Length of 18–25 bases.
- GC content between 40% and 60%
- Melting temperature (T_m) between 55°C and 60°C
- No significant hairpins (>3 bp)
- Free of salts, EDTA, or other contaminants

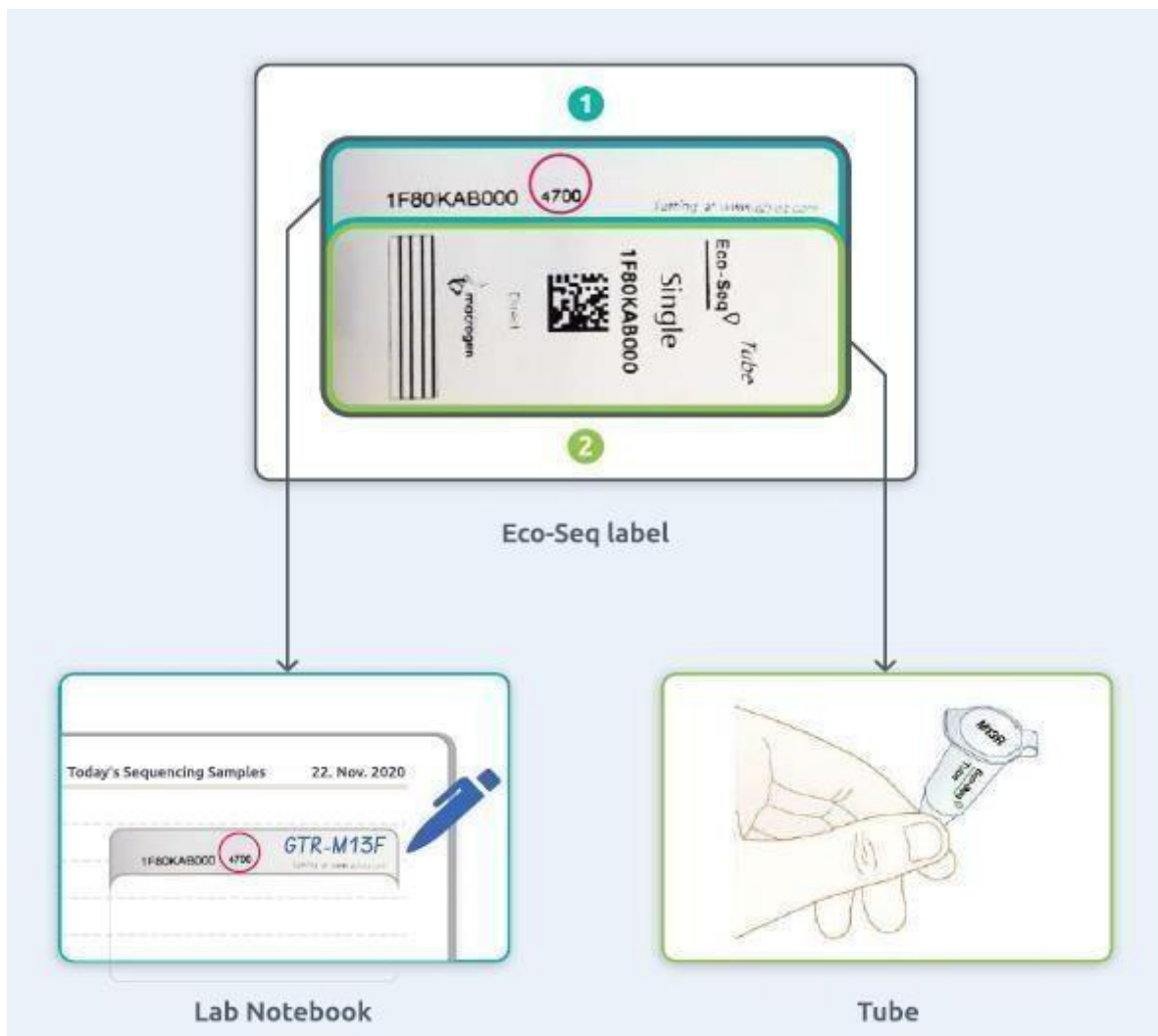
Please provide primers at a concentration of 10 pmole/ μ l = 60 ng/ μ l in deionized water with a volume greater than 20 μ l.

Primers supplied by customers must be **desalted or purified**. Crude primers generally do not perform well in sequencing. We provide the universal primers free of charge. Please refer to the Universal Primer List (pages 11–12).

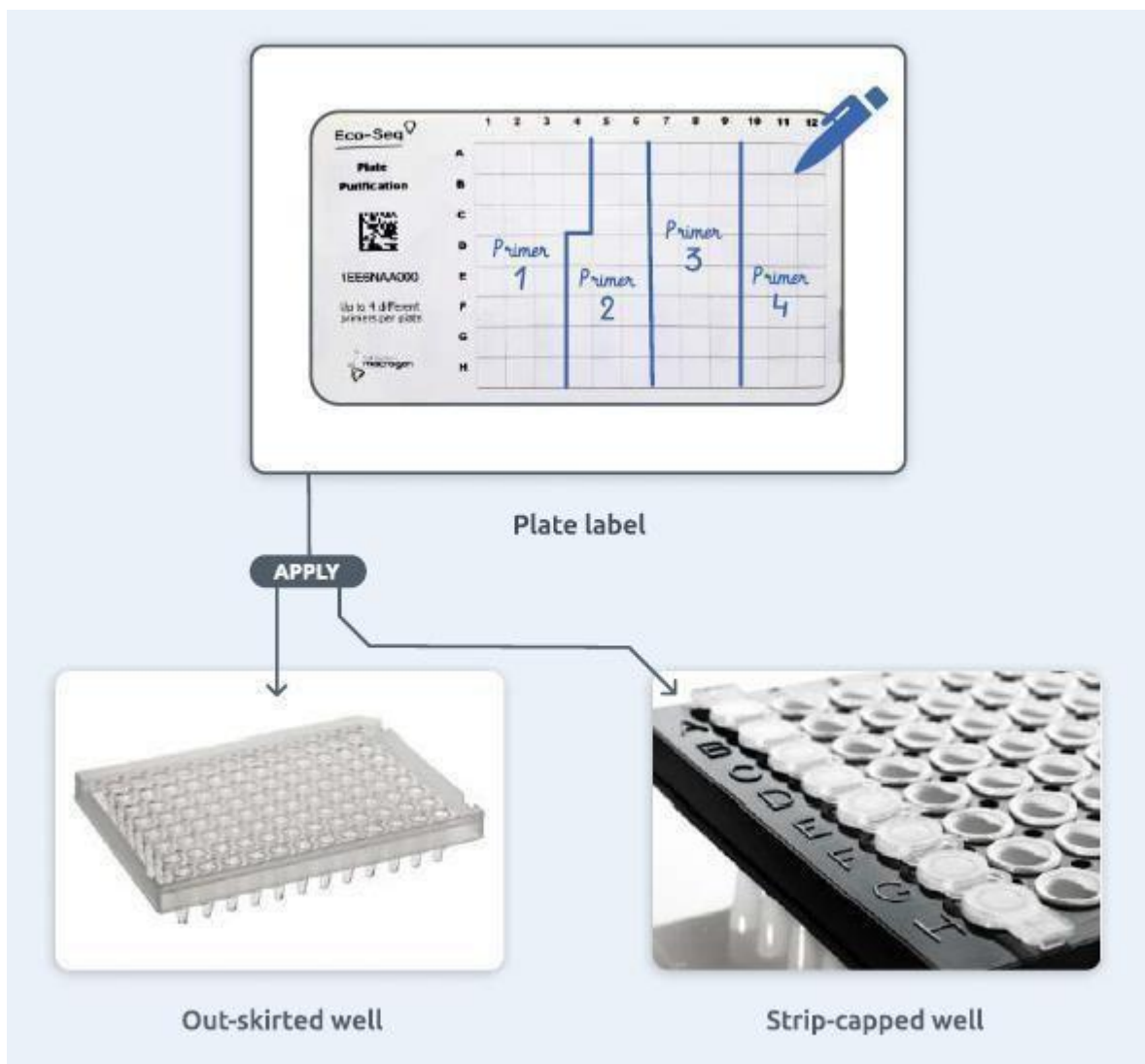
- . Other primers must be sent by the customer in separate tubes.
Please write the primer name on the tube cap.

Sample Submission

- **For Tubes:** Use **1.5 mL** microcentrifuge tubes. Please do not use 0.2 mL PCR tubes.
- The Eco-Seq label consists of two parts, a small upper part **[1]** a larger lower part **[2]** (check the following picture). The smaller part also includes an additional **4-digit number**, which can be used to customize the labels (see page 8: Label Customization)
- The small part **[1]** should be placed in your laboratory notebook.
The right side is intentionally left blank so you can write sample or primer names.
If not needed, this part can be discarded.
- The larger part **[2]** should be attached to the body of the tube.
Wrap it completely around the 1.5 mL tube, ensuring the barcode and number remain visible.
- Sample size below 500 bp? Please mark the label with an additional RED dot (●).
- Do not prepare these samples at excessively high concentrations.
This helps us to optimize the sequencing protocol.



- **For Plates:** Strongly recommended to use **rigid-edge plates** sealed with **strip caps** to prevent leakage during transit.
Use bubble wrap for packaging. If needed, plates with strip caps can be ordered together with Eco-Seq plate labels.
- You will receive one label per plate. Please apply it to the top of the plate. Samples must be loaded vertically (A1, B1, C1, etc.).
- The barcode label grid must be sent with the samples. Up to 4 different primers per plate can be used.
- Indicate the plate sections where the primers corresponding to the samples are placed in the barcode grid, both vertically and horizontally.
Write the abbreviated primer name in each region.



Label Customization

Label Lot

When you receive individual labels, they belong to the same lot.
Please do not mix tubes with labels from different lots in the same package.
This may delay registration and, consequently, result delivery time.

To customize the labels, all you need is the four-digit number located directly under the barcode number.

This allows you to modify the result email address and the file name for each sequencing result.

- Go to <https://order.macrogen-europe.com/>
- Go to "Barcode Modification"
- Enter the label serial number and its four-digit password, below the Eco-Seq Label 1
- "Click login".
- Enter a new email address in the "Return email" field
Add desired text in "Comment 1" or "Comment 2" to assign a name to each result file

[Home](#) | [Ordering](#) | [Sanger Sequencing](#) | [Barcode Modification](#)

My EZ-Seq/Eco-Seq

You can make payments and view your usage history for Ez-Seq and Eco-Seq Barcodes on [the ordering page](#).

You can change the recipient email address from what was provided at the time of order.

Changing the delivery email address will add a new recipient email address for results.

However, we can do this for you upon the confirmation from both parties.

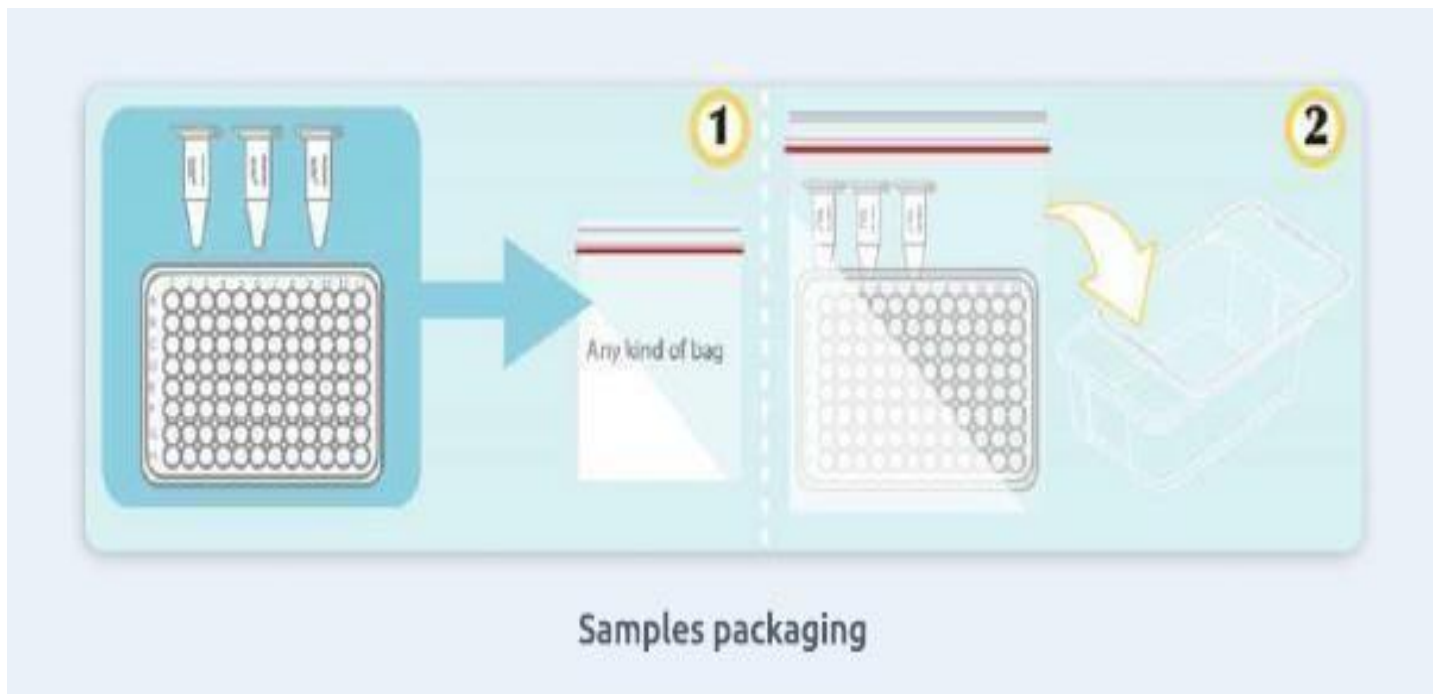
If barcodes are not used, and Macrogen has not received payment for 2 years from the date of the invoice, the invoice and the barcodes will be automatically cancelled.

EZ-Seq Label Modification

Please enter the barcode number you want to use and the password for that barcode.

1

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Please do not mark "Medical Service" for shipping type on the airway bill.
Send samples at room temperature, no ice packs or coolants needed.

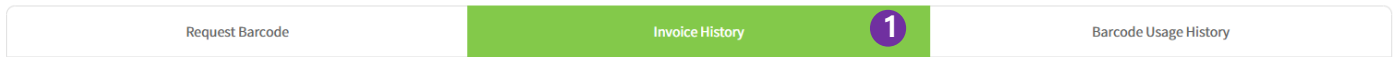
Invoice History and Payment Status

To view invoice history and payment status, visit: <https://order.macrogen-europe.com>

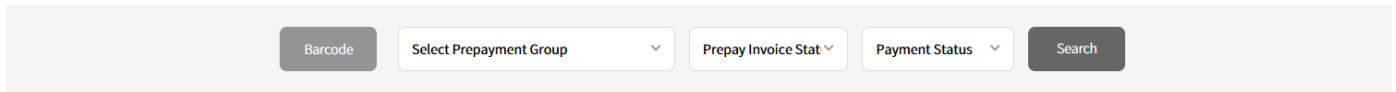
Log in with your credentials and follow "Ordering" → "EZ-seq and Eco-seq" → click on "Invoice history")



EZ-Seq/Eco-Seq



Invoice History



<input type="checkbox"/>	Paid Date	Category	Group Name	Invoice Number	Requested Date	Payment Due Date	Total Amount	Total Payment Amount	Barcode Type	Barcode Quantity	Tracking Number	Prepay Invoice Status	Payment Status
<input type="checkbox"/>		Barcode	Europe Barcode - Macrogen_ITA	EPI00016029 Details	12.05.2025	12.19.2025	€ 0.6	€ 0	Eco-Seq(Eco-Seq Single Direct)	50		Issue	Unpaid Payment

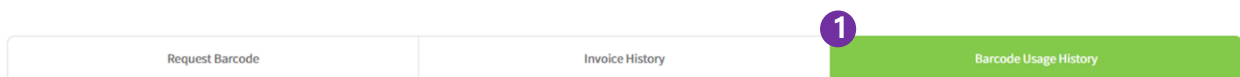
Barcode Usage History

To view used barcode history go to our website <https://order.macrogen-europe.com/>

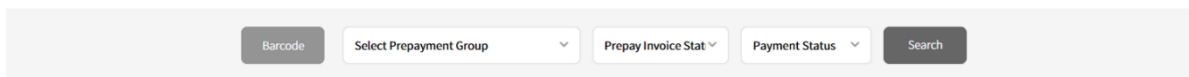
Log in with your credentials and follow "Ordering" → "EZ-Seq and Eco-Seq" → click on "Barcode usage History"



EZ-Seq/Eco-Seq



Prepayment Usage History



Registered Date	Category	Group Name	Invoice Number	Paid Date	Comment	Used Amount	Barcode Quantity
11.27.2025	Barcode	Europe Barcode - Macrogen_ITA	ECI00150908	11.27.2025	EC00205486	€ -0.01	1
10.07.2025	Barcode	Europe Barcode - Macrogen_ITA	ECI00142385		Prepayment Accumulation from Cancel Payment of ECI00142385	€ 0.08	

Universal primer list, available without additional costs

Primer Name	Sequence
Bluescript SK	CGCTCTAGAACTAGTGGATC
EBV-RP	GTGGTTTGTCCAAACTCATC
KAN2-FP	ACCTACAACAAGCTCTCATCAACC
KAN2-RP	GCAATGTAACATCAGAGATTTTGAG
M13-FP	TGTAAAACGACGGCCAGT
pBacPAC-RP	GTCTGTAATCAACAACCG
pBAD-FP	ATGCCATAGCATTTTATCC
pDONOR-FP	TAACGCTAGCATGGATCTC
pEGFP_N	CCGTCCAGCTCGACCAG
pEGFP-FP	TTTAGTGAACCGTCAGATC
pEGFP-RP	AACAGCTCCTCGCCCTTG
pESP-RP	TCCAAAAGAAGTCGAGTGG
pET-24a	GGGTTATGCTAGTATTGCTCAG
pET-RP	CTAGTTATTGCTCAGCGG

pMalE	TCAGACTGTCGATGAAGC
pREP-fwd	GCTCGATAACAATAACGCC
35S-A	AAGGGTCTTGC GAAGGATAG
35S-B	AGTGGAAAAGGAAGTGGCT
AD Reverse	AGATGGTGCACGATGCACAG
CYC1 Reverse	GCGTGAATGTAAGCGTGAC
DsRed1-C	AGCTGGACATCACCTCCCACAACG
DsRed1-N	GTACTGGAAGTGGGGGACAG
EGFP-C	CATGGTCTGCTGGAGTTCGTG
EGFP-N	CGTCGCCCTCCAGCTCGACCAG
GAL1 Forward	AATATACCTCTATACTTAAACGTC
U-19mer Primer	GTTTTCCAGTCACGACGT
T7 EEV	ATGTCGTAATAACCCGCCCCG
Bluescript KS	TCGAGGTCGACGGTATC
pFastBac Forward	GGATTATTCATACCGTCCCA

pFastBac Reverse	CAAATGGGTATGGCTGATT
AOX1 Forward	GACTGGTCCAATTGACAAGC
AOX1 Reverse	GCAAATGGCATTCTGACATCC
a-Factor	TACTATTGCCAGCATTGCTGC
STag 18mer Primer	GAACGCCAGCACATGGAC
MT Forward	CATCTCAGTCAACTAAA
QE Promoter	CCGAAAAGTGCCACCTG
pRH Forward	CTGTCTTATACTCCCCTATAG
pRH Reverse	CAAAATTC AATAGTTACTATCGC
SV40-pArev	CCTCTACAAATGTGGTATGG
SV40-Promoter	GCCCCTAACTCCGCCATCC
pTrcHis Forward	GAGGTATATATTAATGTATCG
ITS1	TCCGTAGGTGAACCTGCGG
ITS2	GCTGCGTCTTCATCGATGC
ITS3	GCATCGATGAAGAACGCAGC

Universal primer list, available without additional costs

ITS4	TCCTCCGCTTATTGATATGC	27F	AGAGTTTGATCMTGGCTCAG	EGFP-CF	AGCACCCAGTCCGCCCTGAGC
ITS5	GGAAGTAAAAGTCGTAACAAGG	1492R	TACGGYTACCTTGTACGACTT	EGFP-CR	CGTCCATGCCGAGAGTG
pJET1.2F	CGACTCACTATAGGGAGAGCGGC	518F	CCAGCAGCCCGGTAATACG	EGFP-NR	CGTCGCCGCCAGCTC
pJET1.2R	AAGAACATCGATTTCCATGGCAG	800R	TACCAGGTATCTAATCC	LCO1490	GGTCAACAAATCATAAGATATTGG
T7	AATACGACTCACTATAG	BGH-R	TAGAAGGCACAGTCGAGG	HCO2198	TAACTTCAGGGTGACCAAAAAATCA
T7terminator	GCTAGTATTGCTCAGCGG	CMV-F	CGCAAATGGGCGTAGGCGTG	785F	GGATTAGATACCCTGTGA
T7promoter	TAATACGACTCACTATAGGG	RVprimer3	CTAGCAAAATAGGCTGTCCC	907R	CCGTC AATTCMTTTRAGTTT
T3	ATTAACCTCACTAAAG	RVprimer4	GACGATAGTCATGCCCGCG	337F	GACTCCTACGGGAGGCWGCAG
SP6	ATTTAGGTGACACTATAG	GLprimer1	TGTATCTTATGGTACTGTAAGT	1100R	GGGTTGCGCTCGTTG
M13F-pUC(-40)	GTTTTCCAGTCACGAC	GLprimer2	CTTTATGTTTTGGCGTCTCCA	NS1	GTAGTCATATGCTGTCTC
M13R-pUC(-40)	CAGGAAACAGCTATGAC	pQE-F	CCCGAAAAGTCCACCTG	NS8	TCCGCAGGTTACCTACGGA
M13F	GTAAAACGACGGCCAGT	pQE-R	GTTCTGAGGTCATTACTGG	LR0R	ACCCGCTGAACTTAAGC
M13R	GCGGATAACAATTCACACAGG	Gal4AD	TACCACTACAATGGATG	LR7	TACTACCACCAAGATCT
pGEX5	GGCAAGCCACGTTTGTTG	pBAD-F	ATGCCATAGCATTTTATCCA		
pGEX3	GGAGCTGCATGTGTCAGAGG	pBAD-R	GATTTAATCTGTATCAGG		